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EDITORIAL.

THE forty-sixth annual session of the College of Pharmacy of the City of New York has drawn to a close; and the commencement exercises will take place on March 21st, at 8 P.M., at Chickering Hall. The continued success and prosperity of the college is shown by the excellent financial exhibit of the Treasurer, Mr. Theobald Frohwein, as well as by the increased number of students who availed themselves of its instruction. Increased facilities for teaching are in prospect for next session, chief among which will be the beginning, at least, of a regular pharmaceutical museum; a good deal of the material for which is already in possession of the college, and has not a little contributed to the practical training of its students in the past. It is also proposed to organize regular quizz-classes in addition to the lectures, and we would most strongly advise those who intend to become students, either to attend the college-quizz, or to organize such classes themselves. The importance of these cannot be overrated; for lectures delivered to an audience must adapt themselves to the average understanding of all, giving only the outlines of the subject, explaining all theoretical points, and leaving for private study the filling in of the framework. Unless the student has an opportunity to test his knowledge by oral questions and answers, which show him his weak points and teach him besides the best manner in which to answer a question, he will find himself at great disadvantage in the end. Given two students, one of whom has had the benefit of a quizz, while the other has not, the former will in most cases pass a much more satisfactory examination than the latter. A list of the graduating class will be published in our next number.

THE plan for the mutual assistance of the families of deceased pharmacists, proposed by Mr. H. A. Cassebeer, Jr., on page 88, is by no means a new one. In one form or another it is being adopted by nearly all trades and professions, and constitutes one of the fairest and best modes of life insurance in existence; but, so far as we can learn from the letter of Mr. Cassebeer, there are some features wanting, we think, in the association which he represents, which are essential to perma-

nence of organization and confidence on the part of the class of persons whom it is proposed to benefit. While it is desirable that the administration of the affairs of such an association should be as simple as possible, some discretion should be exercised in the admission of members, and there should be some method of keeping each subscriber informed of the names and number of his associates. Those beyond middle life should not be entitled to the same rate of insurance as younger members, and at stated intervals detailed reports should be made of the affairs of the organization. There are also many reasons why all the business of such an organization should not be left to any one person, however capable or zealous.

With our next number we shall present the subscribers to New Remedies with a chart showing the correspondence between Troy, avoirdupois, and the metric weights and the weight of fluid measures of distilled water, ranging from one thousand grammes (32 oz., 72.2 gr. Troy) to one-thousandth of a gramme (one sixty-fourth of a grain).

NEW YORK DRUG MARKET.

It would be pleasant to report a better state of trade and more hopeful feeling than we gave in last month's issue, but the condition now is scarcely altered, except that there is much disappointment felt at the slight demand for goods from jobbers' and importers' hands, more especially the latter, who have felt the depressed business rather more than the other branches. When business becomes such that jobbers buy only for immediate wants and refuse to take an extended stock of anything, it falls with great severity upon the importers.

The almost total absence of legitimate speculation has also had its effect in reducing importers' chances for profit; for although speculation in a majority of cases is not considered a healthy condition of trade, yet there always exists opportunities for safe and profitable purchases of goods, which one thoroughly conversant with the market can use to advantage. But the trouble now is, that demand is so small and every buyer so thoroughly imbued with the spirit of the times, viz.: reduction, that the dealer who has gone in at very low prices, hoping to get rid of goods at a fair profit, is either obliged to sell at cost or less, or else make up his mind to "fight it out on this line" and hold his goods for an indefinite time. There are thousands, yes, tens of thousands of dollars' worth of goods held now in just this way. We keep hoping for better times, but it seems a very indefinite hope; but we trust that the "Centennial" year will usher in a little more freedom from uncertainty.

Opium has become somewhat firmer, owing to reports of slight damage to the crop by frost, and a slight advance in price in Smyrna. These reports have not, however, been substantiated, and we doubt if any material damage has occurred. The crop is not safe until about the middle of May. Price is firm at $5.12½ @ $5.25.

Morphia has been in more active demand, owing to the improvement in opium. P. & W. selling freely at $4.10 @ $4.15 in case lots.

Quinia in brisk demand, but no change of price has been made. P. & W. selling in case lots at $2.20 @ $2.25.

Quicksilver has been quiet, prices remaining about as last reported, 67½c. @ 70c.

Borax has been selling in moderate quantities at 11½c. @ 12c. for California. City refined, 11⅞c. @ 12¼c.

Citric Acid is without change, selling in moderate quantities at 78c. @ 79c., gold.

Camphor is very firm, and held at 25⅞c. to 26c., some manufacturers refusing to sell large quantities even at the higher figure. The spring demand for this article, should it reach the usual bulk, will, we think, without doubt, make prices higher, as the stocks of crude are exceedingly small.

Chlorate of Potassium has been somewhat lower, but at the reduced prices has been sold quite freely at 22c., gold.

Iodide of Potassium.—P. & W. and C. P. & Co. are without change from manufacturers' hands, selling at $2.35 in one-pound bottles.

Carbonate of Ammonium is unchanged, English selling at 13½c. to 13⅝c., gold; American, 17c. to 18c. currency. This last is selling quite freely, the quality being very superior.

Carbonate of Magnesium has been in large demand, and the agents for Pattinson's have been unable to fill orders. Some descriptions of Jennings' are also scarce: 4 oz. 32c., 2 oz. 34c., in cases.

Castor Oil does not improve in price, as large quantities have been thrown upon the market, with the effect of weakening prices very materially. Nearly all the dealers and many outside speculators hold large stocks, having bought at from 13½c. @ 14c., considering the price a remarkably low one. But with this article, as with many others, all precedents have been of little value owing to the small consumptive demand. With present stocks we cannot look for any advance for some time to come, the future depending entirely upon the next crop of beans. We cannot think, however, that it will be large, as present prices do not remunerate the farmers, so that next year's production must be demanded.

Cuttle-fish Bone is very firm at 25c., this price leaving importers but little or no margin. The production of this article seems to have been limited of late years to about meet the wants of consumption, so that prices have been high and firm.

Venice Turpentine manifests but little activity, and no change of moment taken place. Price nominally 17½c.

Ergot has been the most active article on the list, prices advancing fifteen and twenty per cent. in a single day. The consumption in this country alone is about 30,000 pounds per annum, while the known stock is only about 3,000 pounds; so that holders have obtained almost any price they chose to ask. Prices are nominally $2.25 @ $2.50, some holders asking as high as $4 @ $5.

Balsam of Copaiba has been in fair demand, and prices are without change. Several lots are now pressing on the market, which, if not taken up, must force prices a little lower; but we do not look for a great difference either way.

Balsam of Tolu about as last reported, selling in a small way at $1.50.

Burgundy Pitch quoted nominally at 8c., but owing to some lots to arrive, this price could be shaded. The price is a comparatively high one, and we think will be lower.

Aloes are without special interest, no change of moment having taken place for some months. Cape, 11c. @ 11½c.; Socotrine, 40c.@ 60 c.; Barbadoes, 24c.

Arnica Flowers are in fair stock, and quite firm; about 12½c.

Chamomile Flowers quiet. German can be bought for 35c. @ 40c.; Belgian, 20c. @ 22c.

Squills are held principally by one house, and 12½c. is demanded.

Manna is without change and quiet. Some small flake, new crop, can be bought for 45c., old crop somewhat less. Large flake, $1.10. No material change looked for.

Senna.—Alexandria is quite high, 16c. being asked for prime. E. I., 9c. @ 10c.

Ginseng is rather nominal, there being but little export demand. Western and Southern are quoted at $1.20 @ $1.30, but large lots would not bring so much.

Seneka Root dull, and quoted at 85c. @ 87½c. A slightly lower figure would no doubt sell a round lot.

Ipecacuanha is not in large stock, but demand being slight prices are rather nominal at $1, gold. A lower price would, however, be accepted.

Assafœtida is in fair demand, the price being so low that many are well enough satisfied to stock up. We cannot see that it will be much lower, but at the same time see no immediate chance for an advance, stocks here and abroad being large.

Tonka Beans.—Angostura are in very small stock, and the coming crop is reported as small and very late, in consequence of which prices are held at $1.50.

Vanilla Beans.—The crop of prime beans is reported small, and recent restrictions of the Mexican Government will make the arrivals very late, so that lower prices are not looked for.

Calamus Root.—Some very nice quality of split and peeled is offered at 35c. Lower grades 12c. @ 15c. @ 25c., according to quality.

Angelica Root.—Prime quality German is somewhat scarce, although inferior quality, wormy, is in good stock.

Guarana in lump sells at $3.50; powdered, $4.

Canary Seed since our last has been more active, as stocks on the spot became scarce, especially for good quality. Prices advanced quite sharply, but of late have softened a little, and at present writing Sicily is quoted at $8.25; Dutch, $7.87½ @ $8; Smyrna, $7.50; and Barbary of poor quality $7.25 to $7.37½.

Hemp Seed has become a little firmer, and sales made at $1.90 for prime Russian. Stocks are abundant, however, and no decided advance is looked for.

Oil Lemon has declined quite heavily, owing to abundant stocks and lower prices in Sicily. Sanderson's has sold at $3.05 @ $3.15, gold, and prices are weak. The consumption of this article seems to have decreased very much during the last two years, so that values are forced down in the face of what would have been considered three years ago a very small stock.

Oil Bergamot is also weaker, and present prices are considered very low. It has been a long time since we have seen it at such figures. Sanderson's selling at $3.15, gold, other brands $3.10 @ $3.15, gold.

Oil Anise.—The production of this article has been unusually large in China, and prices have rapidly declined. It is nominally held at $1.80 @ $1.90, gold, but these figures are entirely nominal, as holders are anxious to sell. Stocks here and to arrive are large, and prices will certainly be lower.

Oil Cassia, owing to advices from China of a scarcity and slightly better prices there, has become somewhat firmer, and 95c. gold is asked. We cannot think, however, that this will last, as stocks are too large to warrant any permanent advance.

Oil Sassafras has continued to arrive in large lots, and price is weak at 55c. in cans. Lower prices are looked for, as the production is largely increased by the very open winter.

Oil Cloves is declining with the price of cloves, and pure oil can be had at $3.15.

Oil Peppermint has sold at $4.12½ @ $4.25 for H. G. H.

Oil Wintergreen is unchanged, selling in lots at $3.15 @ $3.25. The open winter has also greatly facilitated the production of this article.

Roquefort Cheese.—Probably few of our readers know what this cheese is made from. Its consumption has lately increased in an enormous proportion. Twenty years ago it amounted to about 250,000 kilogrammes, but now it reaches the surprising figure of 3,250,000 kilogrammes. China itself, it appears, comes in for no mean part in consumption. France, of course, eats more Roquefort than any other nation; and England is acquiring a taste for it. The ewe's milk, from which it is made, is carefully preserved for the special manufacturing of Roquefort. 250,000 ewes furnish this milk, which is poured into large earthen basins, and slightly heated; it is then placed in moulds under a slice of decayed bread, which promotes the formation of greenish tints; after which the cheeses are salted and piled up in cellars, where they are left for several months before they are edible.

MATERIA MEDICA.

Salicylic Acid compared with other Anti-Ferments.

It is less than a year since the word came that this article possessed manifold anti ferment powers, when used in quantities scarcely at all influencing the human system; and, with all due allowance for the over-estimation of new things, there is little doubt but it is destined to take and hold a place among the more important agents of the pharmacopœia. From indisputable testimony, it arrests a greater number of fermentive changes than carbolic acid or sulphurous acid, and is quite as potent as either in arresting the less determinate changes of putrefaction and decay. It is well known that certain of that class of fermentations due to unorganized ferments—including the change of starch into sugar by diastase or ptyalin, that of myronic acid into mustard-oil on moistening broken mustard-seeds, and the generation of bitter almond-oil and prussic acid from amygdalin—are not prevented by carbolic acid or creosote.*

On the other hand, these agents appear to check those changes due to organized ferments, not only the fermentations proper (as the alcoholic, lactic and butyric), but also the indeterminate changes of putrefaction and decay, which, Pasteur has shown, are allied to the vital fermentations in being invariably accompanied by living growths.

It has been found that salicylic acid does the work of carbolic acid *upon the organized ferments*, and, in many cases, with a greater efficiency. Plugge found that 4 per cent. of phenol (cryst. carbolic acid) were required for the total arrest of alcoholic fermentation, though doubtless a much smaller proportion may prevent the beginning of fermentation, germs being absent from the liquid. Prof. Neubauer, of Wiesbaden, found that $\frac{1}{2}$ per cent. of salicylic acid in fresh grape juice, prevented fermentation, 2 per cent. being required to prevent growth of fungi, $2\frac{8}{10}$ per cent. being required when the juice was planted with 0.001 per cent. of yeast cells (in 0.2 per cent. of fluid yeast), and 5 per cent. being required when the juice was planted with 0.01 per cent. of yeast cells (in 2 per cent. of fluid yeast).†

Prof. Kolbe, of Leipzig, who has originated the manufacture of salicylic acid from cheap materials, has found it efficient in preventing or arresting the alcoholic, lactic, amygdalous and sinapous fermentations, the latter two of which are due to *unorganized ferments*. To be more explicit, he ascertained that grape-juice was preserved from fermentation by one-tenth per cent. of salicylic acid, that four-hundredths per cent. delayed the souring of milk 36 hours later than it otherwise occurred, and that ground black mustard when moistened with very dilute aqueous solution of the acid developed no volatile oil. Also, the very same agent added to urine prevented the generation of ammonia for three days. The investigations of Müller confirm the statement that the action of unorganized ferments is prevented or arrested much more efficiently by salicylic acid than by carbolic acid.*

The action of emulsin in the amygdalous fermentation being paralyzed by 0.2 per cent. of salicylic acid, while requiring 10 per cent. of carbolic acid, and the action of ptyalin in saliva on starch prevented by 1 per cent. of salicylic, and by not less than 10 per cent. of carbolic acid.

Now, in prevention of those changes classed as *putrefactive* (when offensive products appear) *and decay* (when the products are not very offensive), most of which are accompanied by characteristic living growths—there is good testimony for salicylic acid. At the last session of the British Pharmaceutical Conference, Mr. Benger exhibited the results of a series of experiments with those galenical preparations which "must be made after they are ordered," viz., infusions and decoctions, also with lemon juice and flour paste. He had made additions of $\frac{1}{8}$, $\frac{1}{4}$, $\frac{1}{2}$, and one grain of salicylic acid to the fluid ounce, to some 22 different infusions, decoctions and mixtures of the P. B. They stood in uncorked and loosely covered bottles for from two to four months, at temperature of 65° to 75° F., being presented on the 24th of August. Those which had spoiled, from lack of sufficient quantity of the antiseptic, had been rejected. Of the 22 preparations found fresh and good, 12 had required $\frac{1}{2}$ grain, 6 had required $\frac{1}{4}$ grain, and 4 had required one grain, of the antiseptic to the fluid ounce, for preservation. Infusions of buchu, orange-peel and gentian had kept with the smallest quantity; and paste, lemon-juice, and acacia mixture had required the largest quantity of the antiseptic. Juices of taraxacum, conium, and hyoscyamus had failed in a few weeks with one grain to the ounce; but these juices, with half of the alcohol directed by the P. B., and having instead one grain salicylic acid to the ounce, had kept well.

There was a free discussion of the subject in the Conference,‡ with a general acceptance of Mr. Benger's conclusions, but with some dissenting experience. It was also mentioned that the purple precipitate of salicylic acid with tincture of chloride of iron was a frequent inconvenience. The *use of benzoic acid*—recommended by Mr. Rother and by Prof. Salkowski ‡—was discussed, and Mr. Benger

* Lemaire, confirmed by Crookes and Angus Smith, Report on Cattle Plague, 1866; Plugge, *Archiv f. Physiologie*, v., 538; *Amer. Chemist*, 1872, p. 183; *Journal Chem. Soc.*, 1872, p. 104.

† *J. Pr. Chemie* [2], xi. 2; *Jour. Chem. Soc.*, 1875, 459; *Amer. Chem.*, 1875, Aug., p. 48.

* *J. Pr. Chem.* [2], xi. 1; *Jour. Chem. Soc.*, 1875, 459; *Amer. Chem.*, 1875, Aug., p. 48.

† *Phar. Jour.*, 1875 (Sept. 11), p. 211.

‡ R. Rother, *Peninsular Journal of Med.*, 1875, June, p. 257; E. Salkowski, *Pharm. Zeitung*, June 30, 1875; *Klin. Wochenschrift*, No. 22, 1875; *Peninsular Journal of Med.*, Oct., 1875, p. 489.

had tried some infusions with it, and had found these with ¼, ½, and one grain of the benzoic acid to the fluid ounce, had kept one month; those with ⅛ grain having spoiled. The use of salicylic acid in the jar for *preservation of leeches* had been tried by several pharmacists, and both success and failure were reported.

The use of *boracic acid* as an anti-ferment was also referred to during the discussion on Mr. Benger's paper. It has been used extensively on the Continent for preservation of milk and of meat, also forming the principal constituent of a proprietary article called "aseptin," sold for that purpose in Germany, and several of the British public analysts present stated that milkmen use it to preserve milk, in which the analysts had found it.

Mr. Benger also had investigated the effect of salicylic acid upon *albuminoid digestion*. Hard boiled white of egg, 100 grains; Bullock and Reynolds' pepsine, two grains; hydrochloric acid, five minims, and water, one fl. oz., were mixed, and similar mixtures were treated with ¼, ½, and one grain of salicylic acid, and all were set aside at 98° F., for six hours. In the mixture without the anti-ferment, all the albumen had disappeared; in that with ¼ gr., one grain of albumen remained undissolved; in that with ½ gr., two grains of albumen were left; and in that with one grain salicylic acid, only five grains of albumen remained undigested. Parallel experiments with *benzoic acid* indicated that it retards the action of pepsin somewhat more than does salicylic acid. All reports agree that 15 or 20 grains of salicylic acid per day may be taken without notable disturbance or alteration of functions.

In prevention of *putrefactive changes*, or preservation of albuminoid bodies, salicylic acid has been reported efficient. Kolbe found that it preserved eggs, and obtained some results with meat which await fuller investigation.

In *surgical antiseptic* treatment, Wagner * found salicylic acid superior to phenol for both fresh wounds and old sores, and efficient in eczema, diphtheria, and fermentive disturbances of the alimentary canal. It is stated that Prof. C. Thiersch has shown "salicylic acid fully equal to carbolic acid as a preventive of putrefaction in surgical treatment; it surpasses the latter on account of its being odorless and less irritating." Salicylic and carbolic acids are alike in this: they *cannot serve directly as deodorizers*. They do not destroy the fetid products of decomposition, as bromine, chlorinated compounds, nitric acid, permanganate do, not being, like these, "oxidizing agents." On the other hand, these anti-ferments or preservative agents prevent the decomposition which is the source of foul products, as the simple oxidizing agents do not.

In composition, salicylic acid is immediately allied to oil of spiræa and salicin, and nearly allied to benzoic and cinnamic acid, and to phenol (cryst. carbolic acid), from which it is manufactured. It is a somewhat simple derivative of that hydrocarbon nucleus, benzol of coal tar, from which are derived the innumerable compounds of the "aromatic group." This group is eminent for antiseptics; it embraces the cymene and terpene volatile oils, with little doubt most of the resins, finds fullest representation in the balsam, and includes the modifications of tannin. Oxybenzoic acid is isomeric with salicylic acid, but is not antiseptic. The two similar antiseptics—salicylic and benzoic acids, both natural vegetable products—are manufactured from coal-tar, a portion of the benzoic acid of commerce being produced from the hydrocarbon, naphthalin.

It is to be noted that Prof. Kolbe has proven that the *salts of salicylic acid have little or no antiseptic power*, whether with metallic or organic bases, and including, of course, the "oil of wintergreen," methyl salicylate. Dr. Endemann * has pertinently remarked that this fact excludes the use of salicylic acid from alkaline solutions, if they cannot be acidified. Experiments on salivary and pancreatic actions, and Müller's experiments upon the glycogen of the recent liver, may be thwarted from this cause. Also, the fact may be borne in mind, in any theoretical considerations as to the operation of salicylic acid through the blood. Farther, in a solution containing salts, though having an acid reaction, a portion of the salicylic acid added would unite with the basis of the salts (no precipitate being formed), and this would probably deprive the anti-ferment of some portion of its power. Putrefactive changes usually induce an alkaline reaction.—Prof. Albert B. Prescott, in the *Peninsular Jour. of Med.*

[For a variety of formulæ given by Prof. Prescott, see page 94.]

* *J. Pr. Chemie* (2), xi. 57; *Jour. Chem. Soc.*, 1875, 776.

Characteristics of Kosin.

THE female flowers of the Koso-tree yield a resin long used in Abyssinia as a medicine for tapeworm. The flowers contain about 3 per cent. of kosin. In a finely divided state kosin is white, but in crystals of the rhombic system it has the color of sulphur. It melts at 14° C., and on cooling forms a transparent amorphous mass, which, when brought into contact with alcohol, immediately assumes a crystalline texture. Heated more intensely it emits the odor of butyric acid. It is soluble in concentrated H_2SO_4 at 15° C., crystallizes out on cooling, and the crystals are peculiar in having a sp. gr. so great as to sink in H_2SO_4 of a sp. gr. of 1.842. It is also easily soluble in ether, benzol, carbon disulphide, and chloroform; somewhat less so in glacial acetic acid and alcohol, and scarcely at all in water. It is also soluble in the alkalies and alkaline carbonates, and imparts to the solutions a yellow color, which, by standing, passes into red. If kosin be

* *Am. Chem.*, 1875, Aug., in a valuable article before quoted.

melted with caustic alkali it emits an odor of formic and butyric acids, and the mass contains oxalic acid. Analysis leads to the formula $C_{31}H_{36}O_{10}$.—*Flückiger and Buri in Archiv d. Pharm.*

Crystallization and Purity of Glycerine.

At the Chemical Society's meeting on January 20, Dr. Armstrong exhibited a specimen of pure crystallized glycerine from Messrs. Dunn & Co., of Stratford, a portion of a bulk of 40 lbs. The crystallization had been induced by exposure to the cold of the early part of January, combined with the agitation of a journey by rail. Dr. Odling, remarking on the rarity of this product, recalled the fact that another specimen had been shown there some years previously by Dr. Gladstone. It had been produced under similar circumstances. Mr. J. Williams said he had found hydrocyanic acid to be a very delicate test for the purity of glycerine. If the glycerine were perfectly pure, the mixture might be kept for a twelvemonth without change, whilst a slight trace of impurity in the glycerine caused the mixture to assume a yellow tinge in a short time.—*Chem. and Druggist.*

Dulcamarine.

M. Geissler has obtained from the stalks of *Solanum dulcamara* 0.38 to 0.4 per cent. of a definite non-azotized amorphous body which he calls *dulcamarine*. It is aglucoside, for on boiling with diluted sulphuric acid it gives glucose, and 62 to 64 per cent. of *dulcamarétine*. He believes Wittstein's dulcamarine to consist of albuminoid bodies mixed with a small proportion of the above.

A Substitute for Tannin, Sumach and Catechu.

Dubosc has obtained a patent for a new astringent extract, which he obtains from a Brazilian tree, called *quebracho* by the natives, and belonging to the botanical species of *Aspido sperma*. The extract is furnished in the form of a paste or powder, obtained by bleaching the powdered wood, evaporation and concentration. The inventor claims that the new substance closely resembles catechu.

The Betel-Nut.

In certain parts of the East the fondness shown for the betel-nut amounts to something like a passion. It is spoken of with enthusiasm, and many would rather forego meat and drink than their favorite betel. Although held in such great estimation among Asiatics as a masticatory, and supposed to strengthen the gums, sweeten the breath, and improve digestion, the betel-nut has not, until recently, been regarded as possessing any particular medicinal powers beyond those of a mild astringent. It has often been administered as a vermifuge to dogs, and in India and China is given with the same intent to the human subject. Some successful trials recently made of it for the expulsion of the tapeworm led to it being included in the additions to the British Pharmacopœia of 1867 published in 1874.

The betel or areca nut palm is grown in many parts of the East Indies and Eastern Archipelago, from the Red Sea to the Pacific Ocean. The tree is of elegant growth, and rises with a very erect and slender trunk to a height of forty or even sixty feet, the summit terminating in a tuft of dark-green foliage. The trunk is seldom more than eighteen inches to two feet in circumference. The tree produces fruit from the age of five to its twenty-fifth year. It begins to blossom in March and April, and the nuts are fit to gather in the months of July and August, and are fully ripe in September and October. Fourteen pounds is the annual produce of a single tree. The fruit ripens only once during the year, but the nuts vary greatly in size, though their quality depends solely on the amount of astringent matter they contain, a point which is judged of by cutting them. If the white or medullary portion, which intersects the red or astringent part, be small and assume a bluish tinge, and the astringent part is very red, the nut is considered of good quality; but when the medullary portion is in large quantity the nut is considered more mature, and, not possessing so much astringency, is esteemed less valuable.

The ordinary nuts have a thin brown rind, and in size are intermediate between walnuts and hazel-nuts. Their general appearance is of a faint oily gray color, thickly marked with curly streaks of dark-brown or black. The betel-nuts, although softer, resemble ivory, and in the arts are made into necklaces, tops of walking-sticks, and other small objects. The best betel-nut of the Madras Presidency grows in the Nuggar district of Mysore, and in Travancore. It occurs in the market sliced in whole nuts, also boiled and raw, or split and dried hastily over a fire, or dried slowly in that manner. That used by families of rank in Travancore is collected while the fruit is tender. The husk or outer pod is removed; the kernel, a round, fleshy mass, is boiled in water. In the first boiling of the nut, when properly done, the water becomes red, thick, and of a consistence like starch, and is afterwards evaporated into a substance like catechu, and is, indeed, known by the same name. The boiled nuts, being then removed, are sliced and dried, the catechu-like substance is rubbed over them, and, on being dried in the sun, they assume a deep black color. Whole unsliced nuts are also similarly treated. Nuts are fit for the slicing process in the months of July and August. Ripe nuts preserved in the pod are also in use. Nuts for exportation to Trichinopoly, Madeira, and Coimbatore are prepared in thin slices, and colored or left in their natural hue. For Tinnevelly, and other districts, the nuts are simply dried. The quantity of nuts produced on the coast of Sumatra is stated at 80,000 piculs. The quantity imported annually by the Chinese amounts to 45,000 to 48,000

piculs, exclusive of that brought from Cochin China.

The areca palm is mentioned in the Sanskrit writings as *Guváka*. It is called in Chinese *Pin-lang*, a name apparently derived from *Pinang*, a designation for the tree in the Malay Islands, whence the Chinese anciently derived their supply of the seeds. The oldest Chinese work to mention the *pin-lang* is the *San-fu-huang-tu*, a description of Chang-au, the capital of the Emperor Wu-ti, B.C. 140–86. It is there stated that after the conquest of Yunnan, B.C. 111, some remarkable trees and plants of the south were taken to the capital, and among them more than 100 pin-lang, which were planted in the Imperial gardens. There are several other Chinese works, written from the first century downwards, which show that areca nuts were brought from the then unsubdued provinces of Southern China, the Malayan Archipelago, and India. The custom of presenting areca nuts to a guest is alluded to in a work of the fourth century. The Arabian writers were well acquainted with the areca nut, which they called *Fofal*, and with the Indian custom of masticating it with lime. At the present day it is carried by the people of the East in pouches, and presented to guests in the houses of the rich on silver trays, wrapped in gold and silver leaf, and in this form becames an essential part in all ceremonial visiting. Indeed, among some of the inhabitants of the Eastern Archipelago, to refuse to accept betel-nut when offered would give irreconcilable offence.

We have no means of estimating the absolute quantity of this nut which is consumed yearly by the Asiatic natives: but it must be very great. It is chewed probably by not less than fifty millions of men! If we allow to each chewer ten pounds weight a year, which is less than half an ounce a day, this would give the enormous consumption of five hundred million pounds weight every year!

Only tobacco, among the narcotics in common use, is used in larger quantity than this. The wide-spread consumption of the betel-nut gives rise, therefore, to an enormous trade throughout the East, of which some idea may be formed from the exports of Ceylon, which in 1870 were 76,558 cwts. and chiefly to British India. In Travancore alone it is calculated that there were 10,232,873 trees growing. The small quantity imported into England is converted into charcoal for tooth-powder, probably from some imaginary idea that it is superior for this purpose to other kinds of charcoal. The powdered areca nut may be given for the expulsion of tape-worm in the dose of 4 to 6 drachms ($15\frac{1}{2}$–$23\frac{1}{4}$ grammes), taken in milk. The remedy should be administered to the patient after a fast of about twelve hours; some recommend the previous exhibition of a purgative. It is said to be efficacious against lumbrici as well as tæniæ. As a masticatory, areca nut is chewed with a little lime, and a leaf of the betel pepper, *Piper Betel*, L. The nut for this purpose is used in a young and tender state, or is prepared by boiling in water; it is sometimes combined with aromatics, as camphor or cardamom.

The visible effects of the betel are, that it promotes the flow of the saliva, and lessens the perspiration from the skin. It tinges the saliva red, so that when spit out, it falls on the earth like blood. It gives a red color to the mouth, teeth, and lips, which, though at first sight disgusting to Europeans, is by the natives considered ornamental. It imparts also an agreeable odor to the breath, and is supposed to fasten the teeth, cleanse the gums, and cool the mouth. The juice is usually, but not always, swallowed. To persons not accustomed to it, the nut is powerfully astringent in the mouth and throat, and the quicklime often removes the skin, and deadens for a time the sense of taste. It causes giddiness when chewed to any extent. On those who are accustomed to use it, however, the betel produces weak but continuous and sustained exhilarating effects. And that these are of a most agreeable kind may be inferred from the very extended area over which the chewing of betel prevails among the Asiatic nations. In the damp and pestilent regions of India, also, where the natives live upon a spare and miserable diet, it is really very conducive to health. Part of its healthful influence in fever-breeding districts is probably to be ascribed to the pepper leaf which is chewed along with the betel-nut.—*The Chemist and Druggist.*

On Chloride of Ammonium.

Dr. F. R. Hogg writes to the London *Medical Times and Gazette:*

Chloride of ammonium, price one shilling a pound, is sold extensively in Indian bazaars, for cleaning gold lace, as well as for medicinal use, and appears to be obtained from the unburnt extremity of brick-kilns, in which camels' manure is used as fuel. Of course, dirty and impure, it requires to be dissolved, strained, and re-crystallized before internal administration. In England, sal-ammoniac appears chiefly used for cold lotions or freezing mixtures; yet for years the Germans and the French have used it as an alterative deobstruent; and in that interesting work, the "Indian Pharmacopœia," the properties of chloride of ammonium include its use in chronic affections of the lungs, liver, spleen, in hepatic or ovarian dropsy, in passive hemorrhages (especially hæmoptysis), in facial neuralgia, rheumatism, sciatica, amenorrhœa, whooping-cough, intermittent as well as remittent fevers. Locally it has been applied to indolent tumors, enlarged glands, incipient mammary abscesses, hydrocele, bruises, strains, and certain cutaneous diseases. One reads constant praises of the bromide, the iodide of ammonium, yet scarcely ever even mention of the chloride. Just as Dr. Docker revived the fame of ipecacuanha, so did Dr. Stewart, in 1870, endeavor to introduce into notice the varied virtues of chloride of ammonium, and was, according to custom, promptly contradicted. The fact is, he

tried to prove too much: for instance, that the remedy would charm away the pus out of an abscess or abscesses in the liver; would bring the sides of the cavity together, and, with a reduced, reinvigorated liver, the patient would go on his way rejoicing. Dr. Stewart gave scruple doses, morning and evening, kept his patients very still, and on the lightest of diet. His idea was that chloride of ammonium, besides being a general stimulant—diaphoretic, laxative, diuretic, and sedative—relieved the portal circulation, causing also absorption and elimination of diseased products. Very many medical officers think highly of this remedy: others say it is worse than useless, causing dysentery. So far, in remittent and intermittent fevers, in hepatic congestion, or splenic enlargement, the satisfactory results are sufficiently encouraging to make extensive trial of chloride of ammonium.

The Form of Alcohol to be Used Medicinally.

THE above question is discussed in the *American Journal of Pharmacy*, by M. A. W. Miller. He says:

Raw corn whiskey or high wine, such as is used for the manufacture of alcohol, is undoubtedly strictly pure, as there is no incentive whatever to its adulteration. Nevertheless, many vile epithets, such as Jersey lightning, rot-gut, etc., are heaped upon this, simply because it is lacking in smoothness, oiliness, and body; so that it meets with little favor among those who are sufficiently familiar with it to recognize at once its want of age.

In the asthenic forms of many diseases, it is of prime, and often even of vital importance to administer alcohol. Nothing as yet known so well substitutes the functions of food, and thus bridges over the chasm of greatest prostration, during which the system would otherwise inevitably succumb.

While we cannot, and dare not dispense altogether with a drug of such inestimable value, what is there to be gained by running the unnecessary risk of inculcating a taste for the truly fragrant bouquets of choice French brandy, or the almost equally precious old Kentucky Bourbon? We can well afford to dispense with this meretricious and alluring *haut goût* of liquors, which, even in their purest state, are but too apt to win boon companions, ready and willing to follow their enticing solicitations.

The economic aspect is another strong point in favor of the introduction of plain rectified spirit into use as an officinal medicine. Why should the poor day-laborer, suffering, perhaps, from typhoid fever, or, it may be, pulmonary phthisis, be compelled to devote his entire compensation for two or three days of hard toil to the purchase of a bottle of pure imported brandy, when the value of an equal amount of pure spirit, from which he will derive quite as much benefit, can be earned by him in as many hours?

We may sum up as follows: Rectified spirit is almost always strictly pure, while the more expensive liquors invariably contain fusel oils, and very frequently other impurities. The current market price of rectified spirit at present is from $1.25 to $1.50 per gallon, that of fancy-flavored liquors ranging from $2.50 to $12. While the taste and odor of rectified spirit is not so tempting as that of the choice cabinet liquors, it is entirely free from the disgusting smell and flavor of the ordinary diluted alcohol.

Medicated Ice.

THE possibility of using frozen antiseptics in medicine was recently pointed out by Mr. Edward Martin, in a letter to the *Lancet*, as follows: "Every practitioner has at times to face the difficulties of the scarlatinal throat in young children. It may sadly want topical medication; but how is he to apply it? Young children cannot gargle, and to attempt the brush or the spray often fills them with terror. In many cases neither sternness nor coaxing avails. Yet these little ones in almost every case will greedily suck bits of ice. This has long been my chief resource where I could not persuade the child to submit to the sulphurous-acid spray. Lately I have been trying an ice formed of a frozen solution of the acid (or some other antiseptic). Though of course not so tasteless as pure ice, the flavor is so much lessened by the low temperature, and probably also through the parched tongue very little appreciating any flavor whatever, that I find scarcely any complaint on that score from the little sufferers, they generally take to it very readily. The process of making it is very simple; a large test-tube immersed in a mixture of pounded ice and salt is the only apparatus required, and a momentary dip of the tube in hot water enables one to turn out the cylinder of ice as the cook turns out her mould of jelly. I have tried the three following formulæ, all of which answer, though I think I prefer the first:

1, Sulphurous acid, half a drachm; water, seven drachms and a half: mix and freeze.

2. Chlorate of potassium, one scruple; water, one ounce: dissolve and freeze.

3. Solution of chlorinated soda, half a drachm; water, one ounce: mix and freeze.

However, the form is of secondary importance, as each practitioner can construct his own. Boracic acid, salicylic acid, or any other harmless antiseptic with not too much taste, would, doubtless, be as useful as those indicated.

Pancreatine as a Therapeutic Article.

THE active agent of the pancreatic juice has heretofore been known chiefly in the chemical laboratory, and has not come into very general use on account of its cost. Defresne, of Lyons, has now succeeded in producing pancreatine which acts upon the carbo-hydrates and albuminous matters as well as upon the fats, in such quan-

tities as will render its introduction into practice quite easy. Crolas reported to the Société des Sciences in Lyons the results of his experiments with Defresne's preparation, which were in general quite satisfactory. The *Archives med. Belges*, November, 1875, gives the mode by which Defresne obtains his pancreatine. The pancreas of sheep is cut finely and digested for twenty-four hours at a temperature of 45° C. The glandular element is now entirely separated from the fibrous part, which rises to the top. After evaporation, the pancreatine presents itself as a yellowish-white powder, which is soluble in water, and which has a peculiar characteristic taste. The solution is viscid, ropy, as the pancreatic juice itself, and, like albumen, coagulates upon the application of heat. Alcohol precipitates pancreatine from its solution. This precipitate, soluble in water, is the pancreatic ferment, while the remaining fluid has no action whatever. Pancreatine is destroyed by a temperature of 70° C. (158° F.). The metallic salts and tannin also precipitate it.—*Allg. Wien. med. Zeit.*, Jan. 4, 1876.—*The Clinic.*

Suberine.

Lycopodium powder and powder of old wood have been successfully replaced by *suberine*, a powder of vegetable origin, which takes its name from the tree that produces it (*Quercus suber*).

Suberine is essentially a French product, for the Quercus suber grows abundantly in Southern France and in Algeria; it is one-fourth less expensive than lycopodium. It is not only useful in the toilet of young children and corpulent persons, but it is useful also in absorbing the products of blister secretions, in ulcers, in extensive excoriations, etc., etc. Suberine owes to its balsamic properties and the tannin, which it contains in large proportions, the qualities which render its action superior to that of lycopodium, powdered rice, starch, etc.—*Ibid.*, from *Revue Thérapeutique*, 1876.

Saffron.

The firm of Brierre Fils, Pithiviers, France, has published a circular in reference to the adulteration of saffron. They state that a very frequent adulteration is an admixture of from 30 to 40 per cent. of calendula flowers, dyed with Campeachy wood, and known in that state as "*feminelle*." To detect this adulteration moisten a few flowers, and rub them singly on white paper. The genuine flowers will give a fine, rich yellow color, while the *feminelle* will only yield a violet or reddish hue. When the true saffron is macerated in distilled water it will retain its fine red color for many hours, while the *feminelle* will lose their artificial tint within a short time. A still more general method of adulterating saffron consists in adding honey and baric sulphate to the genuine flowers, thus increasing the weight from 10 to 30 per cent. A really handsome appearance is given by further treatment with anilin, but after a time the honey changes the color into a dull shade, and the flowers become sticky. To detect this adulteration put a pinch into a tumbler of distilled water, and agitate for a few minutes. The adulterated saffron will at once turn the water cloudy; even small particles of dust may be seen falling to the bottom; when the water is carefully poured off, a slimy, sand-like mass will be left. When, however, the saffron is entirely pure the water will remain clear, becoming tinged to a bright-yellow color, which will vary in intensity according to the quality of the flowers. Five to ten minutes will suffice for these experiments. Julius Müller also reports, in the *Archiv der Pharmacie*, having met with saffron adulterated with 25 per cent. of calcic carbonate, besides another lot containing 9 per cent. of baric sulphate.—*Oil, Paint and Drug Reporter.*

The Japanese Calomel.

Amongst the useful applications made by the Japanese of mercury, the preparation of calomel, called by them "*keï-fun*," or "light powder," is described in a paper read before the Asiatic Society of Japan. Dr. Geerts, the author, states that this interesting preparation was known since the earliest ages to the Chinese, long before we in Europe had any knowledge of calomel or corrosive sublimate. Our first knowledge about both the chlorides of mercury dates from the time of the Arabian chemist Geber, who has given a prescription which differs but slightly from the old Chinese method of preparing *keï fun*. The product obtained by Geber's method is a mixture of calomel with a little corrosive sublimate, whilst the Chinese knew how to prepare calomel (*keï fun*) and a kind of corrosive sublimate (*sho-ko*), each separately. Until the sixteenth century we did not make, in Europe, a careful distinction between these two chlorides of mercury. Libarius and Oswald Crall first prepared pure calomel (1606–1608) under the name of *Draco mitigatus, Manna metallorum* or *Mercurius dulcis*. It seems very probable that the old Egyptians learned also the preparation of this substance from the Chinese, and we believe that there could be found many proofs of the influence exercised by old Chinese works on the sciences of the West if the numerous volumes of the old library of Alexandria had not been so barbarously burnt.

According to Ranzan, *keï-fun* was for the first time manufactured in Japan in the year 714 in the province of Isé. It was then presented to the empress, Gen-miyo, who reigned at that time. Remarkably enough the preparation of this substance has regularly been effected in this province up to the present time, and the *Isé-oshirir* (cosmetic of Isé), as this calomel is sometimes called, has even largely contributed to the glory of the celebrated temples of Isé. Many of the travellers recovered their health or that of their parents by the use of this important medicine, and attributed the excellent medical properties of this substance largely to the *Kami* of the Isé.

The Chinese or Japanese calomel occurs, ac-

cording to its quality, in fine, brilliant, transparent, flat crystal plates, or as a crystalline powder. Although pure when it is properly made, it is very often (we might say nearly always) adulterated with variable quantities of small crystalline gypsum (*selenite*), or with mica powder, or with both these substances. Dr. Geert states that he once found even more than one-fourth to consist of sulphate of lime. It is prepared to some extent in Japan (Isé, Osaka), but it is also imported in considerable quantities by the Chinese merchants of Nagasaki. The mode of preparation is the following: Two parts of alum, one part of mercury, and one part of common salt are mixed in a mortar with a little water until a very accurate mixture is obtained, in which no globules of mercury can be perceived. After being dried, this mass is placed in an iron bowl, which is closed with a mixture of earthenware, carefully plastered with a mixture of loam, ashes and salt. The whole is then gradually heated on a charcoal fire, and the covering plate in the meantime cooled with wet cloths. The calomel sublimes within four or five hours on the inner side of the cover, as a very porous, light, crystalline powder. The more the sublimate has a light, soft and porous appearance, the more it is esteemed. There are several other prescriptions for preparing this salt, which are kept secret by the manufacturers. The above prescription is given by the large Chinese Materia Medica. The sulphate of lime or selenite, and mica powder are added afterwards, purposely to make this expensive mercurial preparation heavier and cheaper. If the calomel thus obtained has undergone a second and third sublimation it is thought to be much better, and bears then the name of *Fun-sô*. This substance is really calomel in small, soft, tubular crystals.

The *keï-fun* is found in every Japanese drug shop, packed in oblong square wooden boxes or black, shining paper. It is a medicine which is extensively used, and often abused by excessive doses, so that the number of sufferers by mercurial poisoning, or the effects of so long protracted use of quicksilver preparations, is by no means small in Japan. Foreign-made calomel is now becoming more and more popular, especially in the open ports and those places where the influence of the Dutch medical school has been of some importance. The Japanese distinguish this preparation by the name of *Karomera* or *Kanko*. In Osaka and Hiogo calomel is also prepared after the foreign manner.—*Chemist and Druggist.*

A New Disinfectant.

THE *Australian Medical Journal* for July, 1875, contains the report of the July meeting of the Medical Society of Victoria. Dr. John Day, of Geelong, read a paper, with experiments, in which he stated that he had long been endeavoring to find some agreeable as well as efficacious means of purifying and disinfecting the hands after making post-mortem examinations, and for other disinfecting purposes; especially one suitable for those in attendance on sick persons suffering from infectious diseases. In all his experiments he had always looked to oxygen in some form or another as the disinfecting agent. Ordinary oxygen is a weak agent in this way, and in the two active forms of ozone and peroxide of hydrogen, it acquires a somewhat disagreeable odor. After trying various ways of disguising this, he at last succeeded as follows: On examining some of Rimmel's toilet vinegar at the request of a lady friend, he found that it gave the reactions of peroxide of hydrogen pretty freely. He thought it might possibly disguise the smell of the latter substance, and he found that it did so. He therefore mixed ethereal solution of peroxide of hydrogen (the so-called ozonic ether) with toilet vinegar, in the proportion of a drachm to the ounce; and found that the combination was a most agreeable as well as highly efficacious disinfectant. Dr. Day states "that there are two marked advantages to be derived from the combination of vinegar with the peroxide of hydrogen. In the first place, vinegar, in common with most acids, is capable of preserving peroxide of hydrogen; and in the second place it allows of this powerful disinfecting agent being used with soap, the free alkali of which, under ordinary circumstances, would decompose it, but when it is combined with vinegar no appreciable change is produced." He recommends that, after attending persons with puerperal fever, or other infectious diseases, the hands should first be well washed and dried, and that this disinfectant should be used afterwards, being well rubbed into the skin, like eau de Cologne, or any other perfume.—*London Medical Record.*

The Eucalyptus.

A ROMAN priest named Gildas communicates to the Société d'Acclimatation of Paris the results of his experiments with the Eucalyptus Globulus near the Monastery of St. Paul Trois Fontaines, in the Roman Campagna. The trees have thriven, and he believes have given indications of their power to purify the atmosphere, though as yet they are not sufficiently numerous to produce much effect. He also reports that a decoction made from the leaves of the tree possesses valuable properties in cases of fever, and that many persons have been cured of that disease by drinking the "elixir," which is also a preventive of fever. A similar preparation of the leaves in the form of a powder is also made, which has the advantage of keeping good longer than the decoction. The opportunity was, no doubt, too tempting for the good monks of St. Paul Trois Fontaines to resist, and we may soon expect to find their "elixir" on the market, and advertised in the religious journals.

Eucalyptus globulus has also had its share of attention in India, and without considering the question of the truth or otherwise of its reputed value, it is proved that although it grows quickly

and with vigor on the Neilgherries and Khasia hills, at 5,000 to 8,000 feet above the sea, it cannot be induced to live even for a year or two in the hot plains of India.—*The Chemist and Druggist.*

Jervia.

In the *Amer. Jour. of Pharmacy* for Oct., 1875, Charles Bullock describes the alkaloid *jervia*, known for a number of years as existing in the root of veratrum album, but now found by him in the American species, *viride*. Its physiological properties, as described by Prof. H. C. Wood, Jr., are the production of general weakness, without vomiting or purging, lowering of arterial pressure and slowing of the pulse, profuse salivation, and finally convulsions. The character of the convulsions is very peculiar and very constant.

A New Allotropic Form of Phosphorus.

If phosphorus be boiled for five minutes with strong caustic potassa solution, and afterwards washed with water, it retains its liquid form for months at temperatures far below the freezing point of ordinary phosphorus. By sudden cooling, the liquid phosphorus solidifies at 3.3°. It does not oxidize in the air, nor does it emit light in the dark. When this variety of phosphorus solidifies, the ordinary phosphorus as well as a crystalline variety are produced.—*Chem. Centralb.*, 1875, p. 114.

New Source of Tannin.

A plant which grows luxuriously in the West—the *Polygonum Amphibium L.*—has been discovered to contain a very large amount of tannin. Samples of the plant analysed by Prof. Aughey, of the University of Nebraska, show that it contains of tannin in the roots 21.75 per cent., and in the stems 17.10 per cent.

Sumac yields about 16 per cent., and oak-bark from 8 to 12 per cent. It is believed that the plant may be of great commercial importance to the West. It can easily be grown from the seeds, and yields from three to six tons per acre. It is said to be capable of producing all kinds of leather. If the reports in regard to the plant are reliable, it will prove one of the most important discoveries of the decade.

The Botanical Source of Damiana.

Mr. E. M. Holmes, Curator of the Museum of the British Pharm. Society, having lately received samples of three varieties of this drug, obtained from San Francisco, through Prof. Bedford of New York, was struck with their similarity to the leaves of a plant which had a few weeks previously been handed to him for examination by Messrs. Allen and Hanbury. On comparison, the two proved to be identical in taste and botanical characters. The drug was packed in an oblong chest, of which the label was lost. The package formerly belonged to the late lamented Daniel Hanbury. This chest is, therefore, probably the one alluded to (*Pharm. Journ.*, Dec., 1875, p. 493) by Mr. A. McIntosh, of Rothesay, as having been brought over from South California by Capt. Hugo Muller, of Copenhagen. The specimens received from New York contained no flowers; in the chest belonging to Messrs. Allen and Hanbury, however, some flowering stems were met with, which enabled Mr. Holmes to conclude that the plant must certainly belong to the genus *Turnera*, of the nat. ord. Turneraceæ. Neither in the herbarium of the British Museum, nor in that at Kew, is there a specimen exactly corresponding to the San Francisco Damiana, nor does it answer exactly to any of the species described in De Candolle's "*Prodromus*," vol. iii., pp. 346–348. The species which it most nearly approaches in appearance is *Turnera microphylla*, D.C. From this species it differs in the branches being very erect, and in the leaves being downy on the upper surface, those of T. microphylla being glabrous; the bracts also differ in shape, and the plant has not the taste of Damiana. The family of Turneraceæ does not appear to have yet been thoroughly examined, and there are probably many species as yet unnamed, of which this kind of Damiana is probably one. Messrs. Allen and Hanbury's specimen shows that the plant is from two to three feet high, much branched, the stem being woody and suffruticose, and the branches erect from a curved base, cylindrical, with a smooth, reddish-brown bark, the branches all being downy towards the apex. Since the leaves readily fall off, the dried stems bear some resemblance to broom-tops, except in color. The leaves are alternately arranged on the stem, and are hairy on both sides; the under surface being most so. The root is nearly half an inch in diameter, yellowish-white, long and tapering and unbranched, the bark of the root being remarkably soft and spongy.—*Pharm. J. and Trans.*, Jan., 1876.

Incassa Poison.

The President of the African Society in Berlin lately handed to Prof. Liebreich, for examination, a bark obtained from Africa, termed, "Incassa," of a highly poisonous character, and used by the priests and magicians for the purpose of ordeals. Prof. Liebreich obtained from it a crystalline substance which affects animals in the most violent manner; in fact, he states that there is no other poison known, which, in equally small quantities, is alike torturing or destructive. A very small quantity injected into the blood-vessels of a dog causes the latter to yawn, and to suddenly vomit up a bilious-looking matter; the animal remains fully conscious for a while, moves its head about when called, and wags its tail; but suddenly breaks down and dies. Death is caused by paralysis of the heart, which is found filled with blood; occasionally there are short revivals, but

death invariably follows. Prof. Liebreich thinks that if this poison be used in ordeals, recovery can only take place, if after an excessive dose the whole of the poisonous extract has been vomited up. The small quantity of bark at disposal was insufficient to determine the plant, but it is supposed to belong to the nat. ord. *Asclepiadaceæ*, which includes several other cardiac poisons, as, for instance, the echilin-poison, which was used by the negroes of Jamaica for murdering their masters.—*Med. Zeit.*

A New Poisonous Principle in Spoiled Indian Corn.

ACCORDING to C. Lombroso, a tincture of damaged Indian corn, very different from that obtained with the grain when in good condition, contains an oleo-resin soluble in alcohol, and insoluble in benzine. It has a bitter taste, and produces in lower animals and birds choreic movements of the head, in cocks especially of the comb. Besides this substance, a red matter has also been extracted, which is highly poisonous, causing tetanic convulsions and death very rapidly in chickens and frogs. The effects denote the presence of a principle analogous to strychnine. This substance, dissolved in oil, has been successfully used by M. Lombroso as a specific (externally applied) for inveterate skin diseases, eczema and psoriasis.—*Rép. de Pharm.*, 1876, 9.

The Astringent Constituent of Mahogany.

LATOUR and CAZENEUVE have found that the astringent constituent of mahogany is identical with that obtained from catechu ; that is, catechuic acid (or catechin) and its congeners, or derivatives. To obtain the catechin, the wood is exhausted with water, the extract precipitated by acetate of lead until the coloring matter is removed, and the whole filtered. The colorless filtrate is again precipitated by acetate of lead, which throws down catechuate of lead ; the latter is washed with hot water, and, after suspension in water, decomposed by sulphuretted hydrogen. The excess of this latter is evaporated off, the liquid filtered, and concentrated to a small bulk. On cooling, most of the catechin crystallizes out, is collected, washed with cold water, pressed, and dried in vacuo. The elementary analysis led to the formula $C_{30}H_{10}O_9$, or when dried at 100° C., $C_{20}H_9O_8$. The catechin may also be obtained by extracting the wood with anhydrous ether, treating the residue from the ethereal solution with boiling water, and filtering through a previously-wetted filter, to retain fatty matters. On concentrating and cooling the substance is obtained in crystals.—*Bull. d. l. Soc. chim.*, 1875, 118.

Mode of Formation of Gum.

M. MERCADANTE has begun a series of experiments regarding the formation of arabin (gum) in the vegetable cells. From the results so far obtained he concludes that the gum, contrary to previous statements, is not derived from cellulose. On the other hand, Dr. Jos. Möller's investigations seem to prove just the contrary, as he states (*Sitz.-Ber. d. k. Ak. d. Wiss.*, Wien, June, 1875) that acacia gum always arises from a metamorphosis of the cellular walls (from outside inwards) of the inner bark ; occasionally a similar metamorphosis takes place in the cells of the green layer (middle bark), which causes the formation of another variety of gum, similar to cherry-gum.—*Gaz. Chim. Ital.*

Another Source of Solanin.

G. MISSAGHI (*Gaz. Chim. Ital.*) found in an extract prepared from *Solanum sodomeum* a large quantity of crystals, which consisted of solanin combined with a new organic acid. This species of solanum affords a much greater yield of solanin than either *Sol. Dulcamara* or *tuberosum*.

Two New Sugars.

ACCORDING to the researches of H. Fudakowski, of Warschau, lactose or milk-sugar, under the influence of dilute sulphuric acid, assimilates one molecule of water and splits into two new sugars of identical composition, one of which, however, yields, on further manipulation, mucic and lactonic acids, while the other furnishes gluconic acid, and is identical with glucose.

Nature of the Purple of Shell-Fish.

A. and G. DE NEGRI (*Gaz. Chim. Ital.*) communicate the fact that the purple obtained from *Murex trecuculus* consists of two coloring matters, one of which is indigo, which they have obtained pure. While the juice of *M. trecuculus* becomes colored, when exposed to the air, even in the dark, that obtained from *M. brandaris* acquires color only when exposed to light, thereby pointing to the probability of containing different coloring matters. The green coloring substance obtained from *Elyria viridis* they found to be identical with chlorophyll.

Precaution against Carelessness.—There has been invented in Newark, N. J., a glass instrument about the size of a pound weight, which is an alarm to be used in drug stores to prevent the sale of poison by mistake. The invention can be attached to the bottom of any bottle, and when the bottle is removed it gives out a sharp, ringing sound.

The Danger of Keeping Flowers and Fruit in Sleeping Rooms.—This subject is rendered still more interesting by the facts mentioned in the *Wiener Med. Presse*, No. 43, 1875. Dr. Breitter reports that a gentleman had the unhappy idea of making of the branches of an oleander some sort of an alcove in which to sleep; next morning he was found dead. A grocer and his clerk went to sleep in a room where three boxes of oranges stood, and they were dead by next morning. A clerk in a store, who was to watch at night, laid down with a bag of sassafras under his head ; he likewise was found dead in the morning. Another gentleman, having some hyacinths in his room, got the most violent headache, and felt so drowsy that he could scarce keep awake.

PHARMACY.

Correction.

In our article on "Strong Solution of Salicylic Acid," of our February number (p. 44), a few wrong figures have crept into the process during the final make-up. It should read as follows: Introduce 1 ℥ (31.1 gm.) each of salicylic acid and acetate of lime into a half-pint bottle; add about fl. ℥ iv. (118 cc.) of water, and shake well until the salicylic acid has been thoroughly incorporated with the water. Then add fl. ℥ i. (29.5 cc.) of glycerine, and finally enough water to make the bulk up to Oss (236.2 cc.), etc.

Glycerole of Oxgall and Glycerole of Pyrophosphate of Iron.

It is well known that inspissated oxgall, when kept for some time, and perhaps often exposed to the air, acquires such a hard consistence, in consequence of loss of water, that it requires a considerable expenditure of time and labor to prepare a solution of it, such as is often prescribed for enemata. This difficulty may be obviated by preparing a standard solution of oxgall in glycerine in the following manner: 8 troy ounces (248.8 gm.) of dried purified oxgall are dissolved in 3 fl. ℥ (88.6 cc.) of water by the aid of a water-bath; to the solution, while hot, are added 3 fl. ℥ (88.6 cc.) of glycerine under constant stirring, until a perfectly homogeneous mixture has been obtained; it is then allowed to cool, and when entirely cold, enough water, if necessary, is added to make the solution measure 24 fl. ℥ (708.6 cc.). Three minims of this solution contain 1 gr. (0.064 gm.) of purified oxgall. For ordinary purposes the commercial purified oxgall, previously dried to obviate uncertainty of strength in consequence of variable quantities of water, will answer; it is, however, advisable to further purify the substance, which may best be done after the method adopted in the German pharmacopœia: Oxgall, deprived by alcohol of its mucus, is dissolved in water, mixed with one-tenth of its original weight of purified animal charcoal, and frequently shaken, until a small sample of the liquid filtered off furnishes a faintly yellow filtrate. If found necessary, more animal charcoal should be added. The solution is finally filtered, evaporated to perfect dryness, and the product pulverized. The yellowish-white powder thus obtained, consisting mainly of sodic taurocholate and glycocholate, free from bile-coloring matters, must be kept in well-closed small vessels to prevent access of moisture.

In view of the frequent use of oxgall by physicians, and the uncertain strength of the commercial article, we think that purified oxgall decidedly deserves a place in our pharmacopœia.

A similar difficulty frequently arises, when called upon to prepare, at a moment's notice, a solution of pyrophosphate of iron, which has the disagreeable property of being very sluggish while dissolving in water, although the latter is capable of taking up large quantities of it. We have for years been in the habit of keeping on hand a standard solution of pyrophosphate of iron, which we can recommend as exceedingly useful and labor-saving, where time is of value. We prepare it as follows: To 8 troy ounces (248.8 gm.) of pyrophosphate of iron 16 fl. ℥ (472.5 cc.) of boiling water are added, and the whole is kept near the boiling point until the solution has been concentrated to one-half, during which time it is necessary to prevent the formation of a dry crust on the sides of the vessel. When the solution has cooled down to about 120° F. (49° C.) 8 fl. ℥ (236.2 cc.) of glycerine are added, thoroughly mixed with the solution, and the whole allowed to cool. Finally the bulk of the solution is made up to 16 fl. ℥ (472.5 cc.). This solution contains in 2 minims 1 grain (0.064 gm.) of pyrophosphate of iron. Occasionally, but rarely, it may happen that the glycerole when cold turns to a jelly; this is owing to the fact that there is a deficiency of ammonium citrate to keep the pyrophosphate in solution. The whole should in this case be reheated, and a small quantity of ammonium citrate should be added, when on cooling the defect will be found to be removed.

Ch. R.

On Hesperidin.

The first notices of this substance were furnished by Brandes and Lebreton in 1828, who obtained it from unripe oranges, citrons, lemons and pomegranates, in form of a white powder or wart-like crystals (*Journ. de Pharm.*, Jul., 1828). Further researches have since then been made by Widemann (*Rép. de Pharm.*, vol. xxxii.) and Landerer (*ibid.*); Jonas (*Arch. d. Pharm.*, 1847); de Vry, who obtained it from the residues of distillation of Citrus decumana (*Jahresb. f. Pharmacog.*, 1866); Dehn (*Zeit. d. V. f. d. Zuckerind.*, 1865); and Pfeffer, who proved the presence of hesperidin in all the above-named fruits, and its absence in the fruits of Citrus decumana and Bigaradia of the Marburg Garden, as well as in those of Citrus vulgaris Risso. Mr. E. Hoffmann has lately made renewed investigations on hesperidin, at the instance of Prof. A. Hilger, of Erlangen, and has found that the dried bitter orange of commerce affords the greatest percentage (6–8%) of this substance, which resides chiefly in the white parenchyma of the fruit. It is best extracted by exhausting the coarsely powdered material first with cold water, and then repeatedly with dilute alcohol, containing about 1% of potassic hydrate. Addition of hydrochloric acid to this latter solution causes the separation of hesperidin in thick spherical crystals, of yellowish color, occluding considerable quantities of the mother liquor. Purification of these crystals must be conducted with caution. The

crude substance is first dissolved in cold solution of potassic hydrate of 5%; addition of rather large quantities of alcohol throws down certain impurities in the form of a brown resin, rendering the supernatant liquid much clearer and nearly free from color, so as to yield almost pure hesperidin after supersaturating with hydrochloric acid. In perfectly pure and white condition it can only be obtained by repeatedly boiling it in water containing acetic acid, Hesperidin crystallizes from water, alcohol and dilute acids in fine, white, microscopic needles, from watery alkaline solutions, after supersaturation with acids, in spherical crystals, and from alcoholic alkaline solutions, after similar treatment with acids, in needle groups and spheres of great size. It is almost insoluble in cold, difficultly soluble in hot water (1 : 5000), easier in alcohol and hot acetic acid, insoluble in ether, benzole or oils. Alkaline copper-solutions are not reduced by it on boiling. On evaporating hesperidin with dilute potassa-solution to dryness, supersaturating with dilute sulphuric acid, and heating cautiously, characteristic changes of color from red to violet are observed. If one part of hesperidin be heated with ten parts of concentrated potassa-solution until fusion and discoloration of the whole mass has taken place, and after neutralizing with an acid, dilute ferric-chloride solution be added, a *green* coloration is produced either immediately, or, after addition of soda-solution, a play of colors from green through blue and violet to red. This reaction is, however, common to all glucosides which yield with potassic hydrate as final product protocatechuic acid.

Hesperidin is a glucoside of the composition $C_{28}H_{21}O_9$.—*Ber. d. d. chem. Ges.*, 1876, 26.

Relationship of Vanilla to Assafœtida.

FERD. TIEMANN, in conjunction with Mr. Nagayosi Nagai, has obtained a coumarin-like substance by acting with acetic anhydride upon the sodium-salt of vanillin. He calls this substance for the present vanillin-coumarin. On boiling this substance with potassic hydrate, it is converted into an acid, which was found to be identical with ferulic acid found in assafœtida. This latter acid has, according to Hlasiwetz and Barth, the composition $C_{10}H_{10}O_4$, and Tiemann's results show that its rational formula must be $C_9H_6(CO H_3)(OH)O_2$=hydroxylated methoxylated cinnamic acid, or $C_9H_7(CH_3)O_4$=methylcaffeic acid.—*Ber. d. d. chem. Ges.*, 1876, 52.

Recovery of Gold and Silver from Waste Liquids.

FOR the easy recovery of gold and silver, which have accumulated in gilding and silvering works, from waste liquids, Prof. R. Boettger recommends the use of sodium stannate, which is readily prepared by adding to a hydrochloric acid solution of stannous chloride (protochloride of tin) enough caustic soda solution to redissolve the precipitate first thrown down. The liquid containing the gold is brought to boiling in a porcelain vessel, sodium stannate solution is added, and the heat is continued, until all the gold, in combination with tin, has fallen down as a black precipitate. This is washed, dissolved in aqua regia, the solution diluted, precipitated by sodio-potassium tartrate under gentle warming, and the deposited pure gold separated from the solution still containing the tin. Treatment of solutions containing silver and cyanides by sodium stannate, separates the silver at once in a pure state.—*Polyt. Notizbl.*, 1875, 260.

Liquor Chloralo-Camphoratus.

THIS new compound, which is proposed as a substitute for oil of camphor, is prepared by rubbing camphor to a fine powder with the aid of absolute alcohol and adding to it an equal weight of chloral hydrate. The result is a colorless, clear sirupy liquid, partaking of the odor and taste of both constituents, being, however, not a chemical compound as it is split up again into its component parts by water. A similar liquid mixture is obtained by combining 1 part of camphor with 2 parts of chloral hydrate, or 3 parts of the former with 2 parts of the latter. This liquid is miscible with chloroform, benzine, oil of turpentine, etc., but not with aqueous ammonia. Applied to the skin in thin layers it occasions a moderate burning sensation. It is said to be effective in rheumatism and in toothache. The inhalation of its vapor has also been suggested in the treatment of consumption.—*Pharm. Ztg.*, 1875, 97.

The Best Form of Blistering Liquid.

AT the Pharmaceutical Society of Great Britain, on the 2d of February, James Deane, F.L.S., read a paper, the object of which was to ascertain whether acetic ether was equal or superior to a mixture of acetic acid and ether in its power as a solvent of the active principles of cantharides. This was tested by the following experiments:

I. The author prepared twenty fluid ounces of liq. epispasticus, B.P., the formula of which is—

Cantharides	8 oz.
Acetic acid	4 fl. oz.
Ether	a sufficiency.

The cantharides are moistened with the acid, and the ether passed through in a percolator till 20 fluid ounces of liquor are obtained.

II. A liquor was prepared in the following manner: 8 ounces of cantharides were moistened with 4 fluid ounces of acetic ether, allowed to stand in a closely covered vessel for about twelve hours, packed in a percolator, and acetic ether poured on till 20 fluid ounces were obtained.

III. The third experiment was made by following the suggestion of Professor Tichborne, who has recommended the employment of glacial acetic acid instead of that of the ordinary strength. His directions were observed, except that the acid was

mixed with an equal quantity of ether before moistening the cantharides.

Two fluid ounces of each of these products, each representing 350 grains of cantharides, yielded the following quantities of cantharidin :—B.P., 0.8 ; Tichborne, 1.8 ; acetic ether, 2.2, which is possibly a measure of their relative activity. The specific gravities of the three products were, respectively, 0.769, 0.898, and 0.782.

Mr. Brady has pointed out the objections to mixed fluids, which do not dry evenly, but cause a concentration in one point ; it appears, therefore, that we should select acetic ether, as it thoroughly exhausts the cantharides, has a pleasant odor, is free from the objection to the use of mixed fluids, and further, may be used in the preparation of vesicating collodion, pyroxylin being readily soluble in it.

In reply to the chairman, the author stated that medical men in Clapham had always found the acetic ether preparation efficient ; his father had made it twenty years ago, and he believed Mr. Brady had made it for even a longer time.

Mr. Umney discarded the use of ordinary acetic acid shortly after Professor Tichborne published his paper on the subject. He found by experiment that the British Pharmacopœia liquor epispasticus, containing ordinary acetic acid, would produce a blister in about eleven or twelve hours, while that made by moistening the cantharides with glacial acetic acid and digesting for three or four days, and then percolating with ether, would produce a blister in four or five hours. Acetic ether would be an improvement upon the glacial acetic acid and ether, and ether was preferable to the use of ordinary acetic acid.

Mr. Gerrard said a Continental chemist had proposed, in making blister-plaster, to moisten the powdered cantharides with weak potash solution, and after several days to make it slightly acid with hydrochloric acid, and thus liberate the cantharidin, which was the whole point in dealing with cantharides.—*The Chemist and Druggist.*

Iodine and White Precipitate.

We have just received a paper by Prof. F. A. Flückiger, of Strasburg, which gives additional information on the peculiar reaction between iodine and white precipitate, an account of which will be found in our last number. According to his investigations the decomposition of white precipitate by iodine may take place even without the intervention of any fluid. On rubbing together 3 atoms of white precipitate and 4 atoms of iodine, no immediate change is observed ; but on allowing it to stand quietly, it soon afterwards decrepitates or explodes without any violent noise. This decomposition, evidently owing to the formation of iodide of nitrogen, or of iodamine, is remarkable through the fact that it takes place so suddenly and without apparent external impulse. But the same or a very similar decomposition occurs on moistening the two substances with water, in which case a continuous crackling is noticed, which lasts for hours. Hypobromous acid and solution of alkaline hypobromites likewise decompose white precipitate, but with much less energy than iodine in presence of water.—*Ber. d. deutsch. chem. Ges.*, 1875, 1619.

Researches on Eucalyptus Globulus.

In the Academy of Sciences, in Paris, on December 20, M. F. A. de Hartzen read a paper on this subject. The essence of eucalyptus has been examined by M. Cloez. Besides the essence, this tree, according to the writer, contains a considerable number of remarkable substances. The brown residue obtained by distilling the alcoholic tincture of the leaves has been called eucalyptus resin ; this resin contains tannin, and a great deal of fatty matter. Another resinous acid, always mixed with a little waxy matter, from which it seems very difficult to disengage it, is obtained in granules. This latter acid is remarkable ; it is soluble in alcohol, ether, and benzine, insoluble in acetic acid. Concentrated sulphuric acid dissolves it by forming a liquid of a beautiful carmine red, if water be added ; a red matter is obtained by adding ether. If, after having macerated the leaves of eucalyptus in alcohol, they be placed in ether, it extracts from them, besides a residue of resin and brown coloring matters, a considerable quantity of a waxy powder.

Albuminated Sodium Santonate

Has recently been much recommended as an anthelmintic. It is prepared by gently heating in a porcelain dish a mixture of four parts of sodium bicarbonate, one part of santonin and two parts of dried, soluble egg or blood albumen, with a small quantity of water, until a solution is effected ; this is evaporated to dryness and subsequently redissolved in a sufficient quantity of warm water ; the filtered solution is evaporated at a gentle heat to dryness. The remaining albuminated sodium santonate forms colorless, shining scales, readily soluble in water, yielding an alkaline solution which upon addition of acids separates santonine with the evolution of carbonic acid from an excess of sodium carbonate. — *Gazzetta de Medic.* — *Paint, Oil and Drug Reporter.*

Eggs Preserved by Silicate of Soda.

Dr. Durand, pharmacist, of Blois, has discovered a very efficient means for the preservation of eggs ; *i.e.*, a solution of *silicate of soda.*

This solution, being very viscous, is kept in a liquid state by the addition of tepid water. The eggs are dipped into the solution and then dried ; when they have been thus treated and are well dried and completely covered with the silicate solution, they can be placed in any receptacle, and may be kept for a year or more without undergoing decomposition.—*Revue Therapeutique*, 1876.

Rapidity of Filtration.

DR. FLEITMANN has called attention to the fact, not generally known, that, contrary to what at first sight might be expected, filtration is much more rapid through thick paper than through thin, and that it is almost twice as rapid through a double filter as through a single one, and still more rapid through a triple one. He says that he has taken advantage of this fact for a number of years by employing in quantitative analyses a filter of heavy paper beneath the thin one of Swedish paper.

Generation of Ozone.

M. LEUDER (*Annali di Chem.*, November, 1875) proposes the following powder for the generation of ozone: Equal parts of peroxide of manganese, permanganate of potash, and oxalic acid; for a medium-sized room two tablespoonfuls. When water is added the ozone is rapidly generated.

RECENT PAPERS.

Répertoire de Pharmacie, No. 24.—PORTES and RUYSSEN. "On the Methods to Detect Alcohol and Wood Spirit in Mixtures."—E. HECKEL. "On the Active Portion of Pumpkin-seeds." [The most active part said to be the endopleura, or inner greenish coat immediately in contact with the seed itself.]—E. HARDY. "Pilocarpine and the Essential Oil of Jaborandi" (*Pilocarpus pennatifolius*). [According to the author the best method of preparing pilocarpine is to make an infusion of jaborandi leaves, evaporate to a sirupy consistence, mix with excess of magnesia and evaporate to dryness. This mixture is treated with chloroform and then with water; the chloroform is evaporated in vacuo, the water also evaporates, and the pilocarpine is obtained free as a sirupy mass, soluble in water and alcohol and capable of forming crystallizable salts with hydrochloric, nitric and sulphuric acids. Ten kilogrammes of the leaves furnish also 56 gm. of an essential oil of a complex composition.]—No. 1, 1876. F.-A. DE HARTZEN. "Researches on Eucalyptus Globulus." [The resin left by distilling the alcohol from the tincture is dissolved by absolute alcohol, and a warm alcoholic solution of acetate of lead with a little ammonia is added, which throws down a compound of lead with tannin, fatty matters and an acid resin, while another acid resin remains in the alcoholic solution. After filtration the lead is removed by H_2S, the alcohol and acetic acid distilled off, and there is left an acid resin with a little fat. This acid is soluble in alcohol, ether and benzine, and insoluble in acetic acid. Concentrated sulphuric acid dissolves it with a fine carmine color, if water be added. Cautious addition of ether precipitates a red substance, leaving the liquid of a fine purple color.]—BOUCHARDAT. "On the Hygienic and Therapeutic Effects of Extract of Meat."

Pharm. Journ. and Trans., Jan.—E. M. HOLMES. "Gelsemium Sempervirens" (illustr.).—G. DRAGENDORFF. "Studies upon Essential Oils. [The methods of proving adulteration with oil of turpentine or copaiva, and examination of oils of various manufacturers and age.]—G. BROWNEN. "Tellurium as a Probable Impurity in Bismuth."—H. POCKLINGTON. "Some Practical Applications of Polarized Light."—JAMES DEANE. "The Best Form of Blistering Liquid."—H. SENIER. "The Composition of Pilula Hydrargyri P. B."—J. MOSS and A. W. GERARD. "Vaseline."

THERAPEUTICS.

The Nitrate of Zinc in the Treatment of Venereal and Other Lesions.

BY HENRY G. PIFFARD, M.D., SURGEON TO THE CHARITY HOSPITAL, ETC.

IN July last, Cheron published * some experiments which he had made in the treatment of mucous patches (condylomata lata) by a rather novel method. It consisted in first applying nitrate of silver to the surface of the lesion, and then passing a stick of metallic zinc over the same. The results obtained were so remarkable, that Aubert † undertook to repeat the experiments. He came to the conclusion that the effects obtained were brought about by the formation, first, of nitrate of zinc, which in turn underwent a partial decomposition into chloride of zinc (the chlorine being obtained from the fluids and tissues) with free nitric acid. The effective agent, therefore, was the chloride of zinc, aided by the minute amount of nitric acid. He then prepared some sticks of fused nitrate of zinc, and used them directly upon the lesions. The result was healing of the lesion in very much less time than was customary with the ordinary applications.

Impressed by the preceding, I prepared in December last some sticks of fused nitrate, and employed it freely as a cauterizing agent in private and hospital practice. The following results were obtained, transcribed in brief from my own notes, and those of my house-surgeons, Drs. Trask and Booth. The applications were usually made twice a week. More frequent applications, however, would in many cases have secured prompter results. The experiments were made during the months of January and February, 1876.

Wm. F.—Simple ulcer of the leg, of three weeks' standing. First, second and third applications followed by improvement, after which no improvement, and the nitrate discontinued.

J. C.—Pemphigus of two years' standing. After the rupture of the bullæ, open sores, from half an inch to two inches in diameter, would remain for from three to eight weeks without healing. As the eruption was frequent and plentiful, the patient was a mass of sores. These gently touched with the nitrate were all well in from one to two weeks. When fresh bullæ appeared the epidermis was removed, and the raw surface touched once with the caustic. Under these applications they healed in from three to five days.

G. J.—Chancroid of one week's standing; five applications; well in eighteen days. Chronic bubo

* Gazette Medicale de Paris, July 31, 1875.
† Lyon Medical, Oct. 17, 1875.

of long standing; ten applications; well in thirty-two days.

P. C.—Condylomata lata of anus, two months' standing; two applications; well in seven days. Patches of the mouth, of three weeks' duration; two applications; well in six days.

E. L.—Suppurating bubo, six weeks open, 1½″ in diameter; three applications in eight days produced no change; six subsequent applications cured in fourteen days later, in all twenty-two days.

J. R.—Bubo and sinus, 2½″ long, open since August, 1875; five applications; cured in eighteen days.

J. B.—Bubo, five weeks open; ten applications; healed in thirty-eight days.

T. B.—Condylomata lata of anus; one application; well in three days.

J. S.—Irregular chancroid, with tendency to spread; four weeks' standing; six applications; well in twenty-one days.

M. S.—Syphilitic ulcer of mouth; one application; healed in three days.

M. S.—Chronic chancroid, one year old; ten applications; healed in thirty-one days.

M. T.—Chancroid, four weeks' standing; three applications; healed.

M. S.—Two recent indurated erosions, diagnosticated chancres, of right labium; one application; well in four days.

M. M.—Recent bubo, 1½″ in diameter; five applications; healed in twenty-one days.

M. S.—Chronic chancroid, large and indolent, duration unknown; four applications; well in twelve days.

L. L.—Recent chancroid, three weeks' duration; three applications; healed in eight days.

A. C.—Bubo, opened and treated with nitrate of zinc; five applications; healed in fourteen days.

A. M.—Chronic chancroid, of three years' standing, involving ostium vaginæ, fourchette and both labia majora; six applications; healed in twenty-six days.

After the nitrate of zinc applications, the sores were all dressed with an inert powder of starch and lycopodium, in order that the simple effects of the zinc might be observed. It is probable that the usual iodoform dressing would have secured even prompter results.

In the earlier experiments the nitrate of zinc employed was prepared by Mr. Charles Rice and by myself. In the later ones I used some sticks made for me by Dr. Squibb. These latter proved more active, and were altogether better than the ones first used.

Butyl-Chloral.

In a recent article in the *Deutsche Medicinische Wochenschrift*, Dr. Oscar Liebreich states that Messrs. Krämer and Pinner, in the course of their researches on the substance commonly called croton-chloral, have ascertained that it contains two more atoms of hydrogen than was supposed, and that it is in fact butyl-chloral. When soda or another alkali is mixed with it, it undergoes decomposition, chloride of sodium, formiate of soda, and bichlorallylene being produced.

$$C_4H_5Cl_3O + Na_2O = NaCl + CHNaO_2 + C_3H_4Cl_2.$$

Dr. Liebreich has ascertained from a large number of experiments that the physiological action of butyl-chloral is very constant. In rabbits, anæsthesia is always found to commence at the head, a state of hypnotism having been already produced. The animals, while sitting quietly, let the head drop; and anæsthesia of this part now appears, while reflex action can be excited in the limbs; from the head the anæsthesia spreads over the body, and reflex action is not caused by irritation. The respiration and pulse becomes slow; and, with a fatal dose, the respiration ceases before the pulse. The *post-mortem* appearances differ from those of poisoning by chloral, in that in the latter paralysis of the heart is found, both ventricles being full of blood; while in death from butyl-chloral the left ventricle is contracted and nearly empty, the right cavities and the lungs being charged with blood. With this difference in the *post-mortem* appearance corresponds the difference in the mode of death; in chloral-narcosis, general anæsthesia is rapidly produced; *i.e.*, the action of a large dose passes quickly from the cerebrum to the medulla oblongata, and the heart's action ceases while the respiratory movements continue.

Though as yet unable to adduce any practical experience on the subject, Dr. Liebreich believes that butyl-chloral may be very useful as an anæsthetic in operations on the head, especially when, as is sometimes the case, it is impossible to give anæsthetics by inhalation.

The practical value of butyl-chloral, Dr. Liebreich says, lies in its property of diminishing sensibility before producing narcosis. He entertained the hope at first that it would be useful in tic-douloureux; but in the cases in which he has given it, he has, he says, certainly observed relief of the pain, but not an arrest or cure of the malady. The action of butyl-chloral is of less duration than that of morphia; a comparison of the general effects of the two remedies indicates that butyl-chloral should be preferred to morphia or combined with it. Dr. Liebreich observed the action of butyl-chloral in a most marked manner in two cases of tic, in which the tenderness was so great that the patients could not bear to touch the painful parts of the face or to bring a handkerchief near their noses. A *gramme* of butyl-chloral produced complete relief, lasting generally for two hours, each time that the dose was repeated.

Regarding the mode of administration of butyl-chloral, Dr. Liebreich says that at first he tried an alcoholic solution; but he has found that, after long standing, some change takes place which greatly impairs the action of the butyl-chloral. He now orders it in the following form: butyl-chloral-hydrate, 5 to 10 parts; glycerine, 20 parts; distilled water, 130 parts. The mixture requires

to be shaken before being used. The dose is half an ounce, followed in five minutes by a second, and in ten minutes by a third. It is well to begin with a small dose, so as to avoid producing hypnotism—that is, where the anæsthetic effect alone is desired. To produce sleep, one, two, or three *grammes* (15 to 45 grains), according to the patient's constitution, are to be given at bedtime.

Butyl-chloral gives relief in painful affections of the teeth; but of course a radical cure can only be effected by attacking the cause of the disease. It should, whenever possible, be taken after meals, and be followed by a copious draught of water.

Whether any advantage is to be derived from combining butyl-chloral with ordinary chloral or with alkaloids, must be decided by further experiments.—*Br. Med. Jour.*, Feb. 12, 1876.

Administration of Nitrite of Amyl.

Mr. Lenox Browne recommends that, in the administration of nitrite of amyl, it could be more easily and safely employed if it be previously diluted with an equal quantity of rectified spirit. Five measured minims of this mixture may then be safely given, which cannot be done if a less quantity be dropped from the bottle. The best method of inhaling is from a cone of blotting-paper, made from a foolscap sheet twice folded—that is, four thicknesses of paper made into a cone. The effect of nitrite of amyl, as of aldehyde, ether, or chloroform, is much more powerful if added to hot water and inhaled with steam. He has known cases in which the inhalation of the vapor of five drops of chloroform in a pint of water at 120 or 130 deg. F. has been followed by the most unpleasant and even alarming symptoms.—*Br. Med. Jour.*

On the Effects of Feeding with Peptones.

P. Plósz and A. Györgyai (*Pflüger's Archiv*, Band x., p. 536; *Centralblatt für die Medicinischen Wissenschaften*, No. 55, 1875) have performed a new experiment on the nutritive value of peptones, on an adult dog which had fasted for several days. They fed it with solution of peptones and the necessary nutriment free from nitrogen, estimated the quantity of nitrogen in the total excreta of the animal, and compared it with the known quantity of nitrogen in the food. During the whole experiment there was, nitrogen taken in, 14,451 grammes; nitrogen excreted, 13,463 grammes; 0,988 grammes were therefore retained in the body (under the assumption that the quantity of nitrogen can be accurately measured under these circumstances!). The body-weight rose from 2,531 grammes to 2,790, *i.e.*, 259 grammes. Corresponding to the nitrogen deficit in the excreta, one can assume that during the feeding with peptones an addition of albumen had taken place, that the peptones can certainly be changed into albumen and employed for the building up of cells.

Another question of course arises, How far can peptones introduced into the body be followed as such? For the solution of this question, the authors injected 20 to 30 grammes of a watery solution of peptones into the stomach of dogs which had fasted for forty-eight hours, and then killed them after two or four hours. As a test for peptones they employed the reaction of caustic potash and sulphate of copper (purple-violet solution) or boiling with Millon's reagent and nitric acid (yellow coloration). The greatest quantity of peptone by this process was found in the blood of the mesenteric veins and in the extract of the mesentery. The liver contained much less; indistinct traces were found in the blood of the hepatic vein and blood of the carotid artery. On injecting peptones into the veins, a part appeared unchanged in the urine, the larger part remaining in the body, and undergoing further changes. In the blood of the carotid, after three hours, a small quantity of peptone was still traceable. Lastly, the authors conducted blood, to which peptones had been added, in an artificial circulation through the amputated hind quarters and extremities of a large dog just killed (excluding the glands). The circulation lasted four or five hours. Here also the blood lost part of its peptones; in one case twenty grammes of peptones disappeared from the blood. After finishing, the blood was washed out of the vessels with a solution of common salt, and a watery extract of this as well as of the tissue was then made. Neither peptone, nor any other nitrogenous body which one might expect as a derivative of the albumen, was present.—*London Med. Record.*

The Therapeutics of Migraine.

The *Berliner Klinische Wochenschrift* of January 7, 1876, contains a paper by Dr. Schumacher (II.), of Aix-la-Chapelle, on the pathology and treatment of migraine. He remarks that it is very difficult to find out the real nature of this disease. Romberg considered it a neurosis of the fifth nerve. Du-Bois Reymond and Brunner, from personal experience, regarded it as a tetanic or spasmodic condition of the cervical sympathetic, and of the smooth circular fibres of the muscular coat of the vessels. Möllendorf, on the contrary (himself a sufferer from the complaint), taught that the disease is due to a paralytic condition of the sympathetic, through which the vessels of the affected side are considerably dilated, and become overfull of blood, which gives rise to extremely painful sensations on the part of the sensory nerves of this region. The effect of remedies may give us some insight into the real pathology. On Du-Bois Reymond's hypothesis, anti-spasmodics will do most good. Amongst these, nitrite of amyl holds the first place. If we accept the opposite idea of a paralytic condition, our range of remedies is more restricted. Ergot of rye, however, ought to be a potent agent in such a condition. The following case shows that it is so.

Mrs. St.——, aged forty-nine, is of slender build, and suffers from long-standing kyphosis, most marked on the left side. She has cardiac hypertrophy (chiefly of the right ventricle), and has not menstruated since the beginning of 1874. Her pulse is weak, but the heart's sounds are clear, and its impulse is somewhat excessive, even when the patient is at rest. Ever since she ceased menstruating she suffers from time to time, chiefly at night, from violent palpitation of the heart, with feelings like angina pectoris. These attacks last one to six hours, and have been most quickly relieved by subcutaneous injections of morphia. Since the beginning of December, 1874, the patient has complained of violent attacks of pain in the right side of the head; these attacks awoke her in the middle of the night, and were best relieved by getting out of bed. There seemed no reason for these attacks. Bicarbonate of soda, rhubarb, iron, in the day, and morphia and chloral-hydrate at night, only gave partial relief. Towards the end of January she lost the palpitations, but her pulse remained quickened, and she complained of dyspnœa in walking quickly. But the pains in the head became worse and worse, still chiefly on the right side; beginning between 2 and 3 A.M. as a boring pain at the back of the head, which radiated towards the front; the pressure over the eyes being worst, with throbbing of the arteries of the right side, and abnormally increased warmth of the suffering parts, which could be felt by the hand. She was forced to get out of bed, and found relief, especially if she took coffee, from the cool air of the chamber. Towards morning the pain and other symptoms gradually abated, leaving her (when seen in the morning) very prostrate, and with some injection of the conjunctivæ; this redness vanished in the course of the day. Quinine in large doses gave only temporary relief. She could only bear morphia in small doses, and these only relieved her for a time. The induced (interrupted) current was of no use. The constant current from 6–8 cells for eight or ten minutes at a time, through the mastoid processes, or from the top of the sternum to the mastoid process, so far relieved her that she seldom had an attack the same day she was galvanized, and sometimes went from two to four days without one. But after about three weeks of electrifying the attacks were as bad as ever. She was awakened about 2.30 A.M. with boring pains in the back of the head on the right side, with radiations towards particular branches of the fifth nerve (rami masseterici), strong pulsation of arteries, a great feeling of heat, rushing noise in the right ear, reddening of the right half of the face. Towards morning the pains declined. The pulse was but little affected. Watery extract of ergot had been given in small doses without avail in February, but in April, 1875, watery extract of ergot was given in pills, in doses of 4½ to 9 grains. After she had taken (in fourteen days) about 5 grammes [about 77 grains], the attacks, though nightly, were weaker, so that she could remain in bed—with exacerbations every second or fourth day. Of the second 5 grammes, about 13½ grains were taken daily in pills, with still more relief. As this dose seemed pretty nearly a maximum, it was maintained. After taking 27 grammes [about 416 grains] of extract of ergot, she was quite cured of her migraine about the middle of May. In the month of July cardiac dilatation succeeded the previous hypertrophy, and she became dropsical, but there was no return of the migraine. It is noteworthy that the urine was constantly normal, and not affected by the administration of the extract of ergot.—*London Med. Record.*

The Effects of Indulging in the Subcutaneous Injection of Large Quantities of Morphia.

In a recent issue of the *Allgemeine Wiener Medizinische Zeitung* a case is related which shows in a striking manner the remarkable and disastrous effects that may arise from the frequent use of large morphine injections.

The patient, who was himself a medical man, was under the care of Professor Weinlechner, of Vienna. In consequence of the great pain which continued long after an attack of traumatic periostitis of the left shin-bone, he had recourse to the daily subcutaneous injection of morphia. In July, 1867, he used a syringeful of the injection daily, and owing to the frequency and severity of the paroxysms of pain he increased this quantity until by the end of the first year from commencing the injections he used every day as much as ten grains of morphia. At first the injections were followed by sleep, but afterwards by only a feeling of repose. In the beginning of the second year the pains in the shin disappeared, but were followed by great irritability and muscular tremors, especially in the lower extremities. In consequence of the numerous injections that had been used, a number of abscesses made their appearance in various parts of the body, and the suffering arising from these was a fresh pretext for renewing the injections. To such an extent was this practice indulged in, that the daily quantity of morphia now amounted, in the third year, to twenty grains, in the fourth year to thirty grains, and in the year 1873 to as much as forty grains! Since the latter period the patient has been confined to his bed. When visited by Professor Weinlechner he was so covered with abscesses that there was scarcely a sound portion of skin. He was, moreover, reduced to a skeleton, and the skin was so tightly contracted over his emaciated extremities that it could not be raised into folds for the purpose of injection, and both knees were bent at right angles, in consequence of the contraction of the flexor muscles.

With respect to the treatment, the morphia injections were at once given up, a little morphia given internally, or the inhalation of chloroform being occasionally resorted to for the sake of producing sleep. The abscesses were opened, and

healed under very simple treatment. The contracted legs were stretched while the patient was under the influence of chloroform, but without any permanent success; nor was a resort to mechanical means at first attended with any better result. At last, and although there was not the slightest reason for suspecting that there was any syphilis in the case, large doses of iodide of potassium were prescribed, and with astonishing results. The painful spasms of the lower extremities completely ceased, sleep and appetite returned, the patient gained flesh and strength every day, and nothing remained but to overcome the contraction of the limbs by persevering in the use of mechanical extension.—*Med. Press and Cir.*

Bonwill's Method of Inducing Anæsthesia.

At an introductory lecture delivered by Prof. Adinell Hewson, at the Pennsylvania Hospital, and reported in the *Phila. Med. Times* of March 4, by Dr. T. H. Bradford, a description was given, with illustrations, of Dr. W. G. A. Bonwill's method of diminishing or allaying sensibility by rapid respirations. We quote the following portions of the article:

"You have all of you, I have no doubt, experienced the effects of rapid and deep respirations after violent running, or of blowing hard to ignite a fire,—especially the confusion of sight and bewilderment of mind. These Dr. Bonwill recognized many years ago, associated with numbness of sentient nerves, as dependent on the rapidity of the respirations. Pursuing the subject, he has brought it to practical use in his profession—that of dentistry—in which he uses it constantly to diminish the sensitiveness of dentine, and even to produce such insensibility as to allow of the extraction of a molar tooth without pain. Of the latter I have had a demonstration in my own family, which has led me to the study of the subject myself, and this with the most gratifying results. I have used it in stitching wounds, in handling over-sensitive parts, and in probings and the like."

The method was tried upon two boys, who, on account of emotional excitement, failed to carry out the instructions in regard to breathing; and the writer of the report then volunteered to try the process before the class.

"It was his first attempt, and was made sitting erect, with his right hand resting upon a table. Breathing rapidly (for about three minutes) was attended first with a tingling sensation of the surface, especially of the fingers, and a feeling as though the surface was all swelling. Then there followed a dizziness or confusion in the head, with consciousness well preserved, but with a feeling of inability to resist or act in an independent way. He remembered well being frequently asked by the doctor if he was hurting him, but had no recollection afterwards of the pin sticking him, much less of its having been firmly imbedded in his flesh, as he found it when he had ceased the rapid respirations and the anæsthetic effect had passed off.

"Some cases of interest, as showing important points in diagnosis, were after this brought before the class, and the rest of the hour was occupied in their discussion. After dismissing the class, Dr. Hewson went with the writer to the receiving ward, where they found waiting a boy who had fallen upon the ice an hour previously and had sustained a severe injury to his left wrist. He was evidently suffering, and in great dread of being hurt, and the doctor directed him at once to try the rapid respirations. This, in two minutes and a half by the watch, showed some dizziness in the boy's head, when the doctor picked up the limb and moved it about with the utmost freedom, diagnosing a bad sprain of the wrist, and the absence of fracture. When the boy was recovering, he took to crying, on account, he said, of the dizziness and confusion he had experienced. Nothing could have been more satisfactory than this case in its results. He said positively *he was not* suffering any pain, the limb having been put in the easiest position possible."

Leptandra as a Purgative.

Levin J. Woollen, M.D., of Vevay, Ind., writes to the *Louisville Med. News:* "During the past few years I have been prescribing the *fluid extract of leptandra*, with results so gratifying that I desire to call the attention of the readers of the *News* to the virtues of the above-named drug. Whether or not it has any specific action upon the liver I cannot say, but I am certain that it is one of the most efficient and safe purgatives that we have, and can be used without fear of debilitating the patient; in this respect widely differing from podophyllin, a remedy so often prescribed in hepatic disorders.

"In that class of cases usually called bilious, whatever that may mean, where there is loss of appetite, with a heavily-coated tongue and constipation of the bowels, I know of no single remedy so universally applicable and useful as the leptandra. It is often well to combine it with the fluid extracts of senna and rhubarb; but whether so combined or given alone, it is certain in its results, and produces purgation without pain, griping, or debility. In those cases of obstinate constipation occurring in young infants, where it is necessary to resort to a purgative, it will be found that a few drops of the leptandra added to the syrups of senna and rhubarb will produce the best results.

"It must be borne in mind, however, that the proper dose will vary with the individual. Owing to idiosyncrasy or other cause some patients will need but ten minims at a dose, while others will require as much as a drachm to produce any decided effect. The disagreeable taste of the drug is the only bar to its use, and this may be overcome to some extent by combining it with some sirup that is agreeable to the taste of the patient.

"My experience with leptandra has been exclusively with the *fluid extract* as prepared by Dr. E. R. Squibb, of Brooklyn, N. Y."

Camphor Poisoning.

The Druggists' Circular contains the following: "A correspondent of the *London Pharmaceutical Journal* relates a remarkable case of poisoning, the leading features of which are as follows, and they will serve to strengthen the suggestion of the *Druggists' Circular* that especial care should be exercised in the sale of camphor: While some camphor was being weighed out a lad of thirteen picked up two small pieces and took them away with him for the purpose of floating and burning them. Soon afterward he began nibbling the camphor, and, as it afterward appeared, liking the taste of it, continued to do so until he had eaten the two pieces. This was about four o'clock in the afternoon. Four hours afterward the child was with his brother in the dispensary looking on, and was observed to do something which elicited the remark, 'Are you dreaming?' No reply was given by the child, and it was noticed that something was wrong with him; his eyes were fixed in a stare, and he stood motionless and unconscious. His brother took him up to carry him in an adjoining room, where his father was, when he immediately became convulsed and perfectly rigid, with his head and legs bent back, so that he could only be placed on his side upon the floor. The convulsions increased until the flesh from the head to the shoulders became purple, and the pulse decreased rapidly until it could not be felt. The body then lost its rigidity and was apparently lifeless; but in about ten seconds the pulse could again be felt, the convulsions returned, and the child foamed at the mouth. Applications of cold water brought him round in about four minutes; violent vomiting then ensued; the child was for a time hysterical, but within an hour from the first attack he was so far recovered that he could be put to bed. The child afterward described the pieces of camphor which he ate as being each half the size of his thumb, and the assistant who noticed him take one piece thought it must have been about sixty grains in weight. The effects produced in this case were more severe than in any of those previously reported, and there was the further difference that unconsciousness preceded the convulsions, while in the other cases it followed them."

Grindelia Robusta.

Prof. John E. Crowe, of the University of Louisville, writes to the *Louisville Med. News* the results of several trials of *Grindelia robusta* in cases of bronchitis and asthma, and says, in brief: "The excellent results obtained from the administration of this medicine in a number of cases during the past few months really entitles it to the appellation of California's 'last, best gift.' In all the cases in which the medicine was used there was either an asthmatic element or dyspnœa from cardiac or pulmonary complication."

After referring to eleven cases where it had worked well, he adds: "With this experience before me, I am inclined to place a very high estimate upon this medicine in asthma and bronchitis. That it is a specific no one will venture to hope, but that it will prove a useful and reliable adjunct in the treatment of this class of cases I really believe. I cannot speak of its influence *during* an attack of asthma, as I have not administered it under fire, as it were; but as it can benefit the disease only by relaxing the spasm of the medium and finer-sized bronchial tubes, I presume the same beneficial results would distinguish its action here. I am, likewise, well aware that the number of cases in which I have used this medicine is entirely too small to enable me, with anything approaching certainty, to draw general deductions as to its reliability and efficacy. The medicine has certainly had too uniformly a beneficial influence on these patients to say that it is merely a coincidence; that is, was given at that 'tide' in disease which leads to health. I will be amply repaid, if some medical friend has a skeleton about him in the shape of one of these intractable cases, if he derives the benefit from it I have experienced, and bespeak it a trial in case the usual remedies disappoint."

Poisoning by Goats' Milk.

A large number of cases of apparent cholera occurred lately at Rome, under circumstances which led to the examination of the goats' milk used by the families affected by the disease. The goats were all found to be in full health and excellent condition. But, on examining their fodder, a number of poisonous plants were detected among it, among others hemlock and colchicum. It is well known that goats can eat large quantities of hemlock and of tobacco without injury, but the similar innocuousness of colchicum—which acts powerfully upon cows—was not known before. Prof. Ratti examined the milk of these animals, as well as the matters vomited by the affected persons, and detected in both considerable quantities of colchicin.—*Ausland*, 48, 964.

Curare in Hydrophobia.

Offenberg (*Wien. Med. Presse*, 1876, p. 1) gives a case of this disease occurring in a girl of 18. After using injections of morphia and inhalation of chloroform without effect, seven hypodermic injections of curare, aggregating three grains, were administered in the course of five to six hours. The muscular disturbance ceased almost immediately, the other symptoms subsiding more gradually, and, at the same time, paralysis appeared, reaching its height the next day, and gradually diminishing. Great prostration continued, and it was some months before the patient recovered.—*Phila. Med. Times.*

Diuretic Effect of Potassium Chlorate.

DR. JACOBI, in some remarks before the N. Y. Medical Journal Association, stated that chlorate of potassium had a marked effect upon the kidneys, a fact which was not generally appreciated. Dr. Jacobi had a patient who suffered from sore throat, and for whom he ordered an ounce and a half of the chlorate of sodium in solution as a gargle. The patient swallowed the whole quantity through mistake, and in a few days died of nephritis. Dr. Krackowizer lost a patient in a similar manner.

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MEDICINAL PLANTS. Being Descriptions, with Original Figures, of the Principal Plants Employed in Medicine, and an Account of their Properties and Uses. By ROBERT BENTLEY, F.L.S., Professor of Botany in King's College, London; Professor of Botany and Materia Medica to the Pharmaceutical Society of Great Britain, etc.; and HENRY TRIMEN, M.B., F.L.S., Department of Botany, British Museum; Lecturer on Botany at St. Mary's Hospital Medical School, London. Philadelphia: Lindsay & Blakiston. 1876. Small 4to, with colored plates.

Part 1: *Solanum dulcamara, Digitalis purpurea, Mentha viridis, Mentha piperita, Mallotus Philippinensis, Croton eluteria, Croton tiglium, Stillingia sylvatica.* **Part 2:** *Theobroma cacao, Rhamnus cathartícus, Prunus amygdalus, Pyrus Cydonia, Lobelia inflata, Gaultheria procumbens, Cinnamomum Zeylanium.* **Part 3:** *Papaver rhœas, Sanguinaria Canadensis, Barosma crenulta, Citrus aurantium, Olea Europœa, Juniperus communis, Iris Florentina.*

The admirably tinted lithographic plates, which are the chief feature of this work, are carefully drawn from original sources and are of natural size. Each one is accompanied by a letter-press description of the plant, and references to special treatises. The work will serve as a guide to the British, United States, and Indian Pharmacopœias, which have been taken as a foundation in making a selection of the species to be included, and the whole number of plates will probably not exceed three hundred.

In most of its features this work resembles "The American Flora, or History of Plants and Wild Flowers," four volumes, small 4to, published in New York in 1853, by Green & Spencer, of which A. B. Strong, M.D., was the author; but, in addition to the pictures of the plants, the later work gives the botanical details and other matters of importance and interest in connection with the natural history and uses of the species. Those who are in any way interested in the subject of Medical Botany will find the work a very valuable addition to their library.

HOSPITAL PLANS. Five Essays Relating to the Construction, Organization and Management of Hospitals. Contributed by their authors for the use of the Johns Hopkins Hospital of Baltimore. New York: William Wood & Co. 1875. 8vo, pp. 353. With numerous lithographic plans and illustrations.

IN response to invitations from the trustees of the Johns Hopkins Hospital, Drs. J. S. Billings, of the United States Army; Norton Folsom, of Boston; Joseph Jones, of New Orleans; Caspar Morris, of Philadelphia; and Stephen Smith, of New York—five of the first authorities in our profession on the subject of hospital construction and management—have furnished essays upon this important subject, which essays the trustees hope to use as guides to the erection and organization of the hospital and medical school in Baltimore, provided for by the will of the late Johns Hopkins, a merchant of that city.

With fourteen acres of ground in an especially favorable locality for the site of an hospital, and an abundance of means to cover the expense of its construction and maintenance, the trustees have wisely adopted the best means for arriving at the most approved principles which should govern their building and executive committees in putting the will of the founder into practical shape. The different essays vary somewhat as regards their relative merits, but all of them show that the authors have practical knowledge of the subject. Certain vexed questions in regard to proper modes of warming, ventilating, arranging, and constructing the buildings to be used for the sick, would seem to be no nearer solution than before, but it is pleasant, after the excitement which we recently had on the subject of "hospitalism" in connection with some of our own public institutions, to have such testimony as we find in these essays to the fact that hospitalism, so called, has more dependence on slovenly or bad management, than on faulty construction; and we hope that the trustees understand, that build they never so wisely, the success of their hospital, as measured by the cases cured, depends more upon the unceasing vigilance of its administrator, co-operating with the skill of its professional staff, than upon all the modern ideas about ridge or window ventilation, open fire-places or steam radiators, impermeable floors or hollow walls, cheap barracks or buildings that will last for generations.

An Appendix by John R. Niernsée, architect, gives the plans adopted for the Johns Hopkins Colored Orphan Asylum, and some studies for octagon pavilions for hospitals.

In the publication of the work it is evident that no expense has been spared to make it complete, and creditable to all concerned.

URONOLOGY AND ITS PRACTICAL APPLICATION. A Guide to the Examination of Urine and its Diagnostic Value, with Extracts from the Works of the Most Modern Investigators. By GEORGE M. KOBER, M.D., etc. Reprint from the "Richmond and Louisville Med. Journal." 1875. 8vo, pp. 107, paper.

THIS handy and concise little work appeared first in the columns of our contemporary about a year since, and is a very good and clear guide to the analysis of the urine as a means of diagnosis. It is illustrated with eighteen pictures, by the photo-lithographic process, of urinary deposits copied from Drs. Funke, Vogel and Lambl.

A MANUAL OF GENERAL PATHOLOGY. For the use of Graduates and Practitioners of Medicine. By ERNST WAGNER, M.D., Professor of General Pathology and Pathological Anatomy in the University of Leipzig. Translated from the Sixth German edition by JOHN VAN DUYN, A.M., M.D., Professor of Anatomy and Histology in the Medical School of Syracuse University, N. Y., and E. C. Seguin, M.D., Clinical Professor of Diseases of the Mind and Nervous System in the College of Physicians and Surgeons, New York. New York: William Wood & Co. 1876. 8vo, pp. 728.

THERE are few physicians who have not felt the want of a good work in the English language on General Pathology. Heretofore they have been dependent for their knowledge upon treatises on general medicine, in which the subject has, of necessity, been subordinate to Special Pathology, and but briefly considered. Professor Wagner is one of the most able of modern authorities on the subject, and the American editors are well known as competent translators. We have not been able to give the book anything like the amount of attention which it deserves of a reviewer, but a superficial survey of its contents is sufficient

to impress us with its value to any one who cares to practise medicine and surgery intelligently. One paragraph alone has seemed open to criticism, viz., on page sixty-seven. Speaking of movements of the air, it is stated that "east winds are cold, or cold and dry; northerly winds cold, and oftener damp than dry; westerly winds are damp; south winds warm, sometimes damp, sometimes dry, etc." However true this may be for the north-western side of the other continent, it can hardly be said to answer for the eastern and middle portions of this one, where the translation is to be read, and where west and north-west winds are cold and dry, south winds damp, and east winds, owing to the Gulf Stream, nearly always damp. The editors certainly understand the causes which make our climate differ from that of Europe, and the omission of such a correction in the text was undoubtedly through inadvertence. The type and paper are like those used for "Stricker's Manual of Histology," published by the same house in 1872, and for which it is a fitting companion.

INSANITY IN ITS MEDICO-LEGAL RELATIONS. By A. C. COWPERTHWAITE, A.M., M.D. Philadelphia: J. M. Stoddart & Co. 1876. 8vo, pp. 80.

THE increase in the number of cases in which insanity is being pleaded in our courts as a bar to the enforcement of the penalty for criminal acts calls for a better acquaintance on the part of the profession with the disease. The author has in this work embraced in small compass the views of modern specialists, and added such practical suggestions as will aid those who are not specialists to give evidence in legal cases without compromising their reputations for wisdom and sagacity. Although but a pamphlet in size, the book has a table of contents and a good index—excellent evidence of the sound mental condition of its author.

A TREATISE ON THE DISEASES OF INFANCY AND CHILDHOOD. By J. LEWIS SMITH, M.D., Physician to the New York Infants' Hospital, etc. Third edition, enlarged and thoroughly revised, with illustrations. Philadelphia: Henry C. Lea. 1876. 8vo, pp. 724.

To the second edition, published in 1872, Dr. Smith has added chapters on Rötheln and Cerebro-spinal Fever, epidemics of which have occurred in New York since the last edition appeared. Nearly all parts of the work have been gone over in reissuing it, and some portions—the chapter on Diphtheria, for example—have received considerable additions of new matter. There is now no work on the diseases of infancy and childhood better adapted to the uses of the profession in this country than this one of Dr. Smith's, as regards either its completeness, reliability, practical nature, or style of composition.

THE MICROSCOPICAL EXAMINATION OF CRUDE DRUGS AND OTHER VEGETABLE PRODUCTS. By MARK W. HARRINGTON, M.A., Assistant Professor of Botany in the University of Michigan. 12mo, pp. 34.

THESE are advance pages from a MS. work on the Identification of Vegetable Drugs, Foods, and Fibres, in which the subject is treated from what, in medicine, would be called the clinical stand-point. The method of using it is to first note the nature and characteristics of the substance, and then, by reference to the tables, arrive at the name of the object. This, we believe, is much the same as the system pursued by Agassiz in his teaching, and is especially calculated to develop the faculty of observation and insure actual knowledge of the character of the substance examined.

PHTHISIS: Its Morbid Anatomy, Etiology, Symptomatic Events and Complications, Fatality and Prognosis, Treatment and Physical Diagnosis, in a Series of Clinical Studies. By AUSTIN FLINT, M.D., Professor of Principles and Practice of Medicine, etc., etc. Philadelphia: Henry C. Lea. 1875. 8vo, pp. 446.

THIS, as its sub-title implies, is a clinical treatise based upon the recorded observations of over six hundred and seventy cases. The author also includes a number of cases of acute miliary tuberculosis, and of the disease known as cirrhosis of the lung. Owing to the statistical elements of the book, it does not furnish so smooth and agreeable reading as others of Professor Flint's writing, but the thoroughness with which the cases have been analyzed and the value of the author's conclusions will make the work an essential addition to the library of the practising or consulting physician.

NEW BOOKS.

Kirby (E. A.). A Formulary of Selected Remedies, with Therapeutic Annotations. 3d ed. Post 8vo., pp. 204.

Thompson (Sir Henry). The Preventive Treatment of Calculus Disease, and the Use of Solvent Remedies. 2d ed. 12mo, pp. 76.

Groth (P.). Physikalische Krystallographie u. Einleitung in die Kryst. Kenntniss der wichtigeren Substanzen. Mit 537 Holzsch. 8vo, 546 pp.

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Harley. Royle's Manual of Materia Medica and Therapeutics. 6th Ed. By John Harley, M.D., etc. 12mo, pp. 840, cloth.

The following forthcoming publications are announced:

Odling. A Course of Practical Chemistry. Arranged for the use of Medical Students, with express reference to the three months' Summer Practice. By William Odling. M.A., F.R.S. 3d ed., revised and enlarged, with cuts. Crown 8vo.

Miller. Elements of Chemistry, Theoretical and Practical. By William Allen Miller, M.D., F.R.S. Part III.: *Organic Chemistry.* 5th ed., revised, with additions by F. E. Armstrong, Ph.D., F.C.S., and C. E. Groves, F.C.S.

BOOKS AND PAMPHLETS RECEIVED.

Harrington. The Microscopical Examination of Crude Drugs and Other Vegetable Products. Mark W. Harrington, M.A., etc. Ann Arbor: John Moore.

Hoffmann. The Relations of Pharmacists, Physicians, and Nostrums. By Frederick Hoffmann, Ph.D. Pp. 11, 8vo.

Robinson. A Contribution to the Study of Post-Nasal Catarrh. By Beverley Robinson, M.D., etc. 8vo, pp. 29. Privately published.

Medical Examiner. No. 3, Vol. I.

Bentley and Trimen. Medicinal Plants. By Robert Bentley, F.L.S., and Henry Trimen, M.B., F.L.S. Parts I., II., and III. Philadelphia: Lindsay & Blakiston. 1876.

Deneffe and Van Wetter. De l'Anesthésie. Produite par Injection Intra-Veineuse de Chloral selon la Méthode de M. le Prof. Oré. V. Deneffe and A. Van Wetter. Brussels: Henri Manceaux.

Transactions of the American Ophthalmological Society. Eleventh Annual Meeting. New York: William Wood & Co. 1876.

Byford. The Address on Obstetrics and Diseases of Women and Children. By William H. Byford, A.M., M.D. Extracted from the Trans. of the Amer. Med. Assoc.

Piffard. The Treatment of the Scrofulides (Lupus). By Henry G. Piffard, A.M, M.D. Reprinted from *The Practitioner* of Dec., 1875.

Willard Asylum for the Insane. Seventh Annual Report, for the year 1875.

Todd. Veratrum as an Antidote to Opium. By J. S. Todd, M.D.

Keyes. The Effect of Small Doses of Mercury in Modifying the Number of Blood-corpuscles in Syphilis. By E. L. Keyes, M.D., etc.

Handbook of the Benevolent Institutions and Charities of New York, for 1876. Issued under the direction of the Board of United Charities.

Möller. Über du Entstehung des Acacien-Gummi. Dr. Jos. Möller. 8vo.

Knauer. Unsere Kentniss von der Entstehung und dem Baue des Chlorophylls. F. K. Knauer. 8vo.

Buss. Zur Antipyretischen Bedeutung der Salicylsäure und des Neutralen Salicylsäuren Natron. Dr. C. E. Buss. 8vo, pp. 109.

Smith. A Treatise on the Diseases of Infancy and Childhood. By J. Lewis Smith, M.D., etc. Henry C. Lea.

Cowperthwaite. Insanity in its Medico-Legal Relations. By A. C. Cowperthwaite, M.D. J. M. Stoddart & Co. 8vo.

Wagner. A Manual of General Pathology. William Wood & Co.

CORRESPONDENCE.

Dr. Wm. Manlius Smith, of Manlius, N. Y., in a communication addressed to us, says: "I am inclined to think that the plant to which is ascribed in the January number (page 17) such diuretic properties, is the *Asclepias Cornuti* instead of the Apocynum cannabinum, as there given. At any rate, I have had just such favorable results with an infusion of the root of *Asclepias C.*, and it is the plant universally known in this section of the country as *milkweed*. The apocynum is a comparatively unknown plant."

We are of the opinion that Dr. Smith is correct in his supposition.

Esteemed Sir,—It may be that you and most of your readers are not aware of an association in this city formed to give pecuniary aid, in case of death of one of its contributors, to his heirs or persons depending upon him for support. Any apothecary, druggist or assistant, or teacher in a college where pharmacy is taught, if in ordinary good health, can become a subscriber. No initiation fee is demanded, nor are the contributions payable in advance, being only collected on call when the death of a contributor takes place, subscribers having only to take care to pay their contributions in time, and see that they get their receipt for me from the Director. The subscriber has to answer questions similar to those asked by savings banks, and sign the following agreement:

"I, the undersigned, being in general good health, herewith wish to be considered a subscriber to the Apothecaries and Druggists' Mutual Life Association, and will send to the Director, within thirty days of date of notification of death of one of my co-subscribers, the amount of two dollars. I will use all due care in the transmitting of said money, either personally or by post-office order, and see that I get my receipt. In case I should fail to pay said two dollars within the above-mentioned space of time, this neglect or failure of not paying the contribution shall be evidence of my resignation. Should I at any subsequent time wish to renew my subscription, I will pay for each and every death which occurred during the time I suspended such payment or payments, the sum of four dollars. I furthermore agree that in case I remove from within the limits of the cities of New York, Brooklyn, N. Y., Jersey City, N. J., Hoboken, N. J., and Newark, N. J., I, by this act of removal, shall cease to be a subscriber."

The profession will surely join the Association in its effort to ameliorate the condition of those left behind, of their perhaps less successful confrères. The amount each subscriber has to pay at one time is so small, that nearly every one ought to be able to join, the amount to be paid to a contributor's heir depending upon the number of two dollars paid in on that call.

The election of a Director takes place annually by proxy, he who receives the highest number of votes being elected. For further particulars, or blank applications for persons wanting to become subscribers, apply to

H. A. Cassebeer, Jr., *Director*,
57 Fourth Ave., New York.

New York, *March* 2, 1876.

PHARMACEUTICAL SUNDRIES AND NEW INSTRUMENTS.

Oral Specula.

BY H. G. PIFFARD, M.D.

It frequently happens that a thorough inspection of the buccal cavity is desirable, and a method for its convenient accomplishment a desideratum. The ordinary tongue depressor or spatula reveals the hard and soft palates, a portion of the pharynx and a portion of the mucous membrane covering the inner surface of the cheeks. The parts, however, which lie in contact with the teeth and gums, are concealed from view, and necessitate further procedures to bring them under observation. This involves the employment of an additional hand, and an examination made in this way is not altogether satisfactory, and is often uncomfortable to the patient. If beside this it is necessary to make local applications or to perform operations upon these parts, a third hand is necessary, still further complicating the matter. Having frequently experienced these difficulties, especially in inspecting the mouths of syphilitics, I have contrived a simple instrument for obviating them. A glance at the cut (Fig. 1) renders a detailed description unnecessary.

Fig. 1.

The instrument is constructed of copper, and silver plated; the larger loop is for adults, the smaller for children. This instrument used as a tongue spatula displays the parts already

noted, and in addition the portion of the tongue which the fenestrum leaves uncovered; after which it can be rapidly swept around the cheeks and under the lips, and exposes these parts in the most thorough manner. Beside this the velum palati can be pushed up and elevated to a certain extent, a procedure which cannot be conveniently practised with the ordinary spatula. In some cases it is desirable to have the buccal mucous membrane exposed to view and tense, and at the same time both the physician's hands at liberty. To render this possible I have designed the following (Fig. 2).

FIG. 2.

The instrument is first placed in position, and then consigned to the patient, who keeps it there; the hinge or joint enables the instrument to be used for either side of the mouth. The first of these instruments (Fig. 1) is called by Mr. Schmidt, who made them, the "double mouth speculum," the second the "hinged mouth speculum." I do not desire to claim any originality in the conception of these instruments, as the first was suggested by a Sims' vaginal depressor, and the second by an instrument made use of by dentists for retracting the cheeks. I can only say that I have found them exceedingly useful. The cuts are ⅓ natural size.

Iceland Moss Poultice.

WE have received from the New York agents, John F. Henry, Curran & Co., of 8 and 9 College Place, an envelope containing samples of this new poultice invented by Dr. Lelièvre, of Paris. The article consists of two pieces of thin muslin, between which is enclosed a layer of dried moss-pulp, so that it resembles, in consistence, a piece of thin pasteboard. When immersed in hot water for a few moments the poultice swells and becomes soft and mucilaginous, and adapts itself to any surface. It can, in this form, be made to serve as a medium for the application of various remedies, such as opium, sugar of lead, carbolic or salicylic acids, etc.; and, further, after it has become dry, its lightness and stiffness makes it a sort of splint, which may oftentimes be of great service. As it does not ferment, it can be made to serve several days without changing. It is said to retain moisture better than flax-seed; and a recommendation, by no means the least, is that it is always ready. The specimens sent to us are accompanied by a quantity of gutta-percha tissue to be used in preventing evaporation of moisture.

NEW PATENTS AND LAWS.

TRADE MARKS REGISTERED IN U. S. PATENT OFFICE.

Certificates dated Jan. 25, 1876.

3,380. **Medical Compound.**—Relief Manufacturing Company, New York, N. Y. Application filed Jan. 15, 1876. Word "Pyroline."

3,382. **Medical Preparation.**—A. Vogeler & Co., Baltimore, Md. Application filed Jan. 7, 1876. "A cut or picture representing the bust of a man, attired in a dressing-gown and smoking-cap, and having a pair of spectacles lying before him. The man is represented as pouring something from a bottle that he holds before him in his right hand, into a wine-glass, which he holds in his left hand."

3,383. **Medical Preparation.**—A. Vogeler & Co., Baltimore, Md. Application filed Jan. 7, 1876. "A cut or picture representing the bust of an old woman, with cap and hood on her head, and wearing spectacles, and holding up a cup before her in her right hand."

Certificates dated Feb. 1, 1876.

3,387. **Liniment.**—Matthew Churchill, Boston, Mass., assignor of one-half his right to Anna M. Thorndike, same place. Application filed Jan. 21, 1876. The letters "C.H.P." in the form of a monogram, and the words "Churchill's Household Physician. 'The Greatest Discovery of the Age.'"

3,398. **Hair Restorative.**—Selah R. Van Duser, New York, N. Y. Application filed Jan. 14, 1876. "Words 'Mrs. S. A. Allen's Zylo Balsamum.'"

3,399. **Hair Restorative.**—Selah R. Van Duser, New York, N. Y. Application filed Jan. 14, 1876. "Words 'Mrs. S. A. Allen's World's Hair Restorer.'"

Certificates dated Feb. 8, 1876.

3,404. **Surgical Appliances for the Body.**—W. H. Horn & Brother, Philadelphia, Pa. Application filed Jan. 15, 1876. "The representation of the horns of a deer or other animal."

3,405. **Stomach Bitters.**—Joshua C. Michel, St. Louis, Mo. Application filed Jan. 3, 1876. "Words 'West India Stomach Bitters,'" and the design representing a tropical scene, wherein the natives are gathering plants and loading them (in the form of bales) upon a ship in the distance.

LABELS REGISTERED IN THE U. S. PATENT OFFICE.

Certificates dated Jan. 18, 1876.

491. "**Benedict's Unrivalled Plasters.**"—S. G. Boyd & Co., Glenn's Falls, N. Y. Application filed Jan. 12, 1876.

492. "**Oleo Electrico, Rei Da Dor [King of Pain].**"—Charles De Grath, New York, N. Y. Application filed Jan. 11, 1876.

495. "**Talcott's 'Cure' for Scratches.**"—James C. Talcott, New York, N. Y. Application filed Jan. 8, 1876.

497. "**Mrs. E. L. Webster's Sylvan Balsam.**"—Mrs. Elizabeth L. Webster, Boston, Mass. Application filed Jan. 13, 1876.

Certificates dated Jan. 25, 1876.

498. "**Dr. Frederick E. Melsheimer's Children's Drops.**"—Edmund L. Melsheimer, Davidsburg, Pa. Application filed Jan. 13, 1876.

499. "**Dr. Ricker's Gold Eagle Balsam.**"—Henry E. Pearson, Newburg, Mass. Application filed Jan. 18, 1876.

500. "**Pyroline, an External Remedy for the Cure of Gout, Rheumatism, etc.**"—Relief Manufacturing Company, New York, N. Y. Application filed Jan. 18, 1876.

501. "**Dr. James' Orange Tonic, or the True Elixir of Life.**"—Robt. I. Toplis, Yonkers, N. Y. Application filed Jan. 14, 1876.

Certificates dated Feb. 1, 1876.

502. "**Liquor Boracis Comp.**"—Chas. G. Am Ende, Hoboken, N. J. Application filed Jan. 25, 1876.

504. "**A. D. Coles' Fever and Ague Annihilator and Blood Purifier.**"—A. D. Coles, Brooklyn, N. Y. Application filed Jan. 27, 1876.

505. "**Condie's Aperient Elixir.**"—James Condie, New York, N. Y. Application filed Jan. 24, 1876.

506. "**Davis' Charcoal and Orris Tooth-Soap.**"—Thomas M. Davis, Cambridge, Mass. Application filed Jan. 21, 1876.

512. "**Dr. Albert Conradi's Augsburger Tropfen.**"—Leopold Salamonson, Cleveland, Ohio. Application filed Jan. 26, 1876.

Certificates dated Feb. 8, 1876.

522. "**Johnson's Emollient.**"—Johnson & Wightman, Brooklyn, N. Y. Application filed Jan. 25, 1876.

527. "**Lindsay Whooping-Cough Compound.**"—John B. Lindsay, Pittsburg, Pa. Application filed Jan. 31, 1876.

NEW PATENTS.

December 28.

171,473. **Truss-Pads.**—Isaac N. Foote, Middletown, Ohio. [Filed Dec. 21, 1874.] The front of the pad is soft rubber, which, in process of manufacture of the pad, is vulcanized to the hard-rubber back. The soft pad has a recess for holding the shank of a small additional pad mounted upon it.

171,532. **Processes of Preserving Butter.** — Frederic H. L. C. Sacc, Neufchatel, Switzerland. [Filed Nov. 4, 1875.] The described process of preserving butter by mixing the same with two per cent. of alcohol at 90° C.

171,635. **Filters.**—Thomas R. Sinclaire, New York, N. Y., assignor to Sinclaire Rectifying Machine Company, same place. [Filed April 20, 1874.]

171,536. **Remedies for Pulmonary Diseases.** — John O. Slimmons, Pittsburg, Pa. [Filed Feb. 24, 1875.] A medical compound, composed of a mixture of oil of sassafras, oil of hemlock, alcohol, No. 6, tincture of lobelia, tincture of blood-root, molasses and water, with oil of anise and balsam-fir, substantially in the proportions and for the purposes specified.

171,606. **Cork-Stoppers.**—J. I. Flanagan, Philadelphia, Pa. [Filed Nov. 30, 1875.] A stopple having its body made of the ordinary bark of cork-wood, combined with a wire stem bent and secured in said body.

171,637. **Atomizers.** — Henry R. Spencer, New York, N. Y. [Filed Nov. 18, 1875.] An inner loose tube rests with its flattened and up-turned nozzle just inside of the air exit. A valve is in the lower part of the extension-tube, to be inserted in the liquid.

January 4, 1876.

171,658. **Bitters.**—Johanna Gerlitz, Philadelphia, Pa. [Filed Nov. 17, 1874.]The composition, being a bitters, consisting of brandy, kümmel-seed, fennel-seed, wormwood, wild-cherry bark, convallaria-root, orange-peel, lavender, and water, substantially, and in the proportions described.

171,662. **Food Extracts from the Juice of Fish.**—Stephen N. Goodale, Saco, Me. [Filed Oct. 18, 1875.] The new article of food described, composed of a fluid or semi-fluid concentrated extract of fish, substantially, as set forth.

171,677. **Syringe-Tubes for Treatment of Rectal Diseases.**—Morris Mattson, New York, N. Y. [Filed Dec. 18, 1874.] A rectal-pile pipe has the interior fluid inducting tube extended to its farther end, to insure a perfect cooling of the extreme inner end of the pipe.

171,681. **Spectacle-Holders.**—Gustavus Meyer, Quincy, Ill., assignor of one-half his right to Julius Franke, same place. [Filed Oct. 1, 1875.]

171,748. **Abdominal Corsets.**—E. Turner, Rochester, N. Y. [Filed Dec. 8, 1875.]

171,752. **Corkscrews.** — Francis T. Witt, Brooklyn, assignor to King, Briggs & Co., New York, N. Y. [Filed Dec. 6, 1875.] The corkscrew is provided with a sheath, which may be fitted into a ring in the head, to serve as a handle.

171,813. **Retorts for Distilling Phosphorus.**—Andrew George Hunter, Detroit, Mich. [Filed Aug 28, 1874.] The middle portion of the retort is filled with carbon, and heated to a white heat. The mixture of phosphoric acid and carbon placed in the upper compartments of the retort is dropped upon the heated carbon on opening the valves, and the vapors are compelled to pass down through the mass to the exit pipe. The operation is continuous, and the exhausted residue is drawn off at the bottom of the retort.

171,848. **Disguising Sirups for Medicines.**—Robert S. Peyton, Pinckneyville, Ill. [Filed Jan. 16, 1875.] A vehicle for disguising nauseous medicines, composed of simple sirup, glycerine, and oil of wintergreen, mixed together in about the proportions described.

Reissues.

6,840. **Electro-Magnetic Machines.**—Jerome Kidder, New York, N. Y. Patent No. 93,625, dated August 10, 1869. [Filed Nov. 1, 1873.]

January 11, 1876.

171,912. **Packing-Cases for Demijohns.** — Geo. W. Baker, New York, N. Y. [Filed July 28, 1875.] Provides a case with a shield, having a sliding hinge, so that the shield may swing from the aperture through which the neck of the vessel protrudes, and be slid out of range of said aperture.

191,934. **Electro-Medical Apparatus.** — Richard W. Hathaway, Chicago, Ill. [Filed Nov. 20, 1875.] Electrode plates for each hand and foot, with suitable connections to induction coil and switches, so that currents may be transmitted through any portion of the body and reversed at will.

171,954. **Tonic Remedies.**—Benj. F. Rucker, Navasota, Tex. [Filed Oct. 9, 1875.] A medical compound, consisting of sulphate quinine, dilute sulphuric acid, purified chinoidine, sulphate iron (c., p.), sulphate magnesia, oil peppermint, and saturated quassia water (q. s.), substantially as described.

171,996. **Spring Scales.**—G. H. Chatillon, New York, N. Y., assignor to John Chatillon & Sons, same place. [Filed Oct. 25, 1875.]

172,060. **Anti-Spasmodic Remedies.**—W. Taylor and T. Y. Boston, Cave Spring, Mo. [Filed Nov. 10, 1875.] A medical compound as a remedy for spasms and epileptic fits, consisting of a fluid prepared of bromide of potassium, fluid extract of valerian, bromide ammonium, cohosh, and water, mixed in the proportions substantially as described.

172,073. **Mud-Baths.**—Henry J. Bang, New York, N. Y. [Filed Oct. 4, 1875.] The device is to be used in mud-baths. The straps protect against the buoyancy of the mud, while the branches of a pipe introduce steam into each compartment of the tub. The process of applying a mud-bath by injecting jets of moist steam into the body of the mud during the operation of bathing, substantially as described.

172,101. **Apparatus for Filling Bottles, &c., with Aërated Liquids.**—J. Edwards Hull, assignor to H. T. W. Munroe, Beverley, England. [Filed April 19, 1875.] Three ways lead through the standards and frame-work—one for liquid, one for sirup, one for air. The sirup passes from the pump through one tray, and around the top-post by the check-valve to the bottle. The aërated liquid passes through another way by turning a tap, air being let out as desired through the tap. By giving the frame a semi-revolution the bottle-neck points downwards, and the internal stopper falls to place.

172,104. **Corkscrews.**—Wm. Engelsdorff, Chicago, Ill. [Filed June 3, 1875.] A cork-extractor having a tapered stock and a segment-shaped lateral blade, the lateral blade having a convex lower edge bent outwardly, and a spur, substantially as described, and for the purpose set forth.

172,114. **Articles of Food for Pastry, Puddings, etc.**—Lorenzo D. Gorton, Philadelphia, Pa., assignor to Charles N. Gorton, same place. [Filed July 17, 1875.] A new and useful article of food, composed of grated cocoa-nut meat, pulverized white sugar, rice-flour, and corn-starch in or about the proportions specified.

172,123. **Disinfecting Apparatus for Privy-Seats.**—William H. Hutt, Philadelphia, Pa. [Filed Dec. 1, 1875.] When the closet is in use the disinfecting-boxes are separated by mechanism, so as to allow of the passage of fecal matter. When the said boxes are brought together, all of the ascending gases which pass through the seat become deodorized.

172,139. **Manufacture of Cider and other Beverages.**—John Mathews, New York, N. Y. [Filed Dec. 14, 1875.] The beverage is made by mixing the fluid extract, pointed out in the claim, with a suitable quantity of water and sugar. The mixture is placed in a receiver and charged with carbonic acid. After being allowed to stand for a time sufficient for the gas to combine the other materials, it is ready for use.

172,181. **Thermometers.**—Gustav W. Schumacker, Portland, Me. [Filed Dec. 8, 1875.] A thermometer made of corrugated rubber arms which work a lever, indicating the variations of temperature on a scale.

January 18, 1876.

172,264. **Labels for Bottles.**—John L. Dawes, Pittsburg, Pa. [Filed Sept. 20, 1875.] A strip of paper bearing printed matter is pasted to the rear side of a glass plate, both so combined being then cemented to a bottle, jar, or other vessel.

172,283. **Processes of Purifying and Improving the Quality of Distilled Spirits.**—Sullivan Sweet, Jr., Boston, assignor to A. L. Wood, trustee, Brookline, Mass. [Filed May 7, 1875.] The improvement in the art of purifying or aging liquors herein set forth; that is to say, washing and purifying air, and then warming it before it is forced into the spirits.

172,344. **Syringe Attachments for Commodes.**—Monroe Ross, New York, N. Y. [Filed Dec. 24, 1875.] An eduction pipe is attached to the inner, and an induction pipe to the outer surface of the bowl of a commode, and water is supplied from a compressible rubber bulb worked by a lever.

172,391. **Manufacture of Sealing-Wax.**—William R. Clough, Newark, N. J. [Filed June 14, 1875.] The process consists in separately forming the less and the more adhesive portions of wax, and uniting them without mingling them.

172,449. **Hair Restorative Compositions.**—A. R. Kenyon, Downer's Grove, Ill. [Filed Sept. 26, 1874.] Consisting of extract of grape-vine, salt, castor-oil, and alcohol, in about the proportions specified.

172,506. **Machines for Purifying Semoline.**—Heinrich Seck, Frankfort-on-the Main, Germany. [Filed Oct. 22, 1875.] The combination with casing and fan, of two series of troughs, and the air-induction apertures of the latter being located at a point above the air-induction apertures of the former, in such a manner as to cause the air to take an upward course through the first series.

172,532. **Processes for Extracting Malt.**—Edward U. Weiss, New York, N. Y. [Filed Dec. 13, 1875.] The process for extracting malt by separating the bran from the malt, and mixing the latter with straw or its equivalent, and then washing and filtering the same.

Reissued.

6,867. **Medicated Plaster.**—A. D. Richards, Somerville, Mass., assignor by mesne assignments, to Grosvenor and Richards. Patent No. 111,682, dated Feb. 7, 1871. [Filed Dec. 14, 1875.] A medicated plaster, composed of belladonna, pitch, and India-rubber.

January 25.

172,560. **Water Filters and Purifiers.**—Paul de la Neuville, Enfield, Conn., assignor to himself, H. Hamlin, Moise Lemire, and S. La Chapelle. [Filed Dec. 6, 1875.] The tank is divided into compartments, the bottom of the upper one being formed of a stone slab, made porous by a treatment of acetic acid, so that the water will filter through it. The water in the middle compartment, after passing through the stone, is subjected to the action of the fumes of carbonic acid, and is again filtered through carbon to remove all further impurities which might remain.

172,575. **Covering Bottles.**—Jas. Mathis and Emil Neuhart, Rochester, N. Y. [Filed Dec. 23, 1875.] A covering for bottles, consisting of a plastic compound of paper-pulp and cooked glue, having cylindrical sections of wood protruding through the envelope, and provided with channels worked into its surface, patches of moss attached to its outside, and a wood veneer bottom.

172,581. **Specific Gravity Scales.**—Roswell Parish, Worcester, Mass. [Filed April 10, 1875.]

172,627. **Headache Remedies.**—Henry W. Hollon, Skaneateles, N. Y. [Filed Oct. 19, 1875.] A medical composition, consisting of gentian and aromatic spirits of ammonia, bromide of sodium, and tincture of lupulin.

172,665. **Combined Reclining and Invalid Chairs.**—Val De Mar Sleight, New York, N. Y., assignor of one-third his right to J. H. Gifford, same place. [Filed Oct. 22, 1875.] The several parts are combined and arranged so that the chair can be adjusted for use as a rocking or reclining chair, or as a cot.

172,694. **Abdominal Supporters.**—Wm. C. Blakeslee, Union, N. Y. [Filed Feb. 25, 1875.] The Supporter is made up of a band about the chest and one about the loins, connected together by straps and to suspenders, which are attached to pads resting upon the shoulders, sliding pads rest upon the hips, and the main front pad is made up of a pad proper, and a presser underneath it.

172,705. **Machines for Coating Pills.**—William N. Clark, New York, N. Y. [Filed Jan. 7, 1876.] Needles are arranged on a rotating shaft, and are furnished with clearers to remove the pills after coating. The pills are fed up to the needles upon a grooved sliding platform.

172,728. **Compositions for Preserving Animal Matter.**—Wilton C. Donn, Washington, D. C. (administrator of Henrik Gahn, deceased), assignor to Charles G. Am Ende, Hoboken, N. J. [Filed Oct. 20, 1875.] The composition of boracic acid and saltpetre.

172,757. **Bottle Stopper.**—J. Mathews, New York, N. Y. [Filed April 5, 1875.] By rotating the bail the stopper is forced in or out by the action of the inclines.

172,828. **Medical Compositions.**—Miller J. Rogers, New Gloucester, Me. [Filed Sept. 4, 1874.] A lozenge compound of oil of fir, tincture of lobelia, cayenne pepper, white sugar, and the necessary gums to form the lozenge.

172,849. **Construction of Filters.**—John Frederick Crease, Eastney, Great Britain. [Filed Sept. 15, 1875.] The compressing device and air inlet to the filtered water-chamber.

172,868. **Cork-Screws.**—William H. Clough, Newark, N. J. [Filed Nov. 1, 1875.] A cork-screw formed of a single piece of wire, a portion of the wire being formed into a screw, its upper part formed into a handle, and its free end utilized to strengthen the shank between the handle and screw.

172,871. **Apparatus for Applying Croton Oil.**—John W. Elliot, Toronto, Canada. [Filed Aug. 17, 1875.] Croton oil is fed slowly upon needles projecting slightly from the surface of a roller, which is passed over the part of the body to be treated.

172,929. **Oil-Can Nozzles.**—S. S. Newton, Binghamton,

N. Y. [Filed Jan. 20, 1876.] An oil-can nozzle made in two parts connected by a flexible tube, also a hollow shaft within said nozzle, which serves to operate a valve through which the oil is discharged, the oil being delivered through the hollow shaft.

172,932. **Eye-Glasses.**—Chauncey C. Parker, Brooklyn, N. Y. [Filed Jan. 13, 1876.] The method of securing the bow-springs to the frames of eye-glasses by attaching the spring to an auxiliary plate by means of suitable slots, tongues, lips, or loops formed thereon.

172,942. **Rendering and Clarifying Fats.**—Wm. E. Andrew, New York, N. Y. [Filed Dec. 10, 1875.] Renders animal fat by steam heat, and withdraws immediately into steam-heated clarifier, where solution of salt or saltpetre is forcibly injected into the oil, kept at a lower temperature (120° Fahrenheit) than the clarifying solution (140° Fahrenheit). When beeves' fat is to be treated for use in making artificial butter, hot air supplants steam to heat the rendering kettle.

172,995. **Manufacture of Soluble Gun-Cotton and Products therefrom.**—Frederick Greening, Beaufoy Road, Plaistow, England. [Filed Dec. 23, 1875.] The ligneous fibre is treated with a mixture of sulphuric, hydrochloric, and nitric acids, the gun-cotton dissolved by means of any of the well-known solvents, and mixed with powdered glass, etc., to form a semi-transparent substance. Gun-cotton is submitted with paraffine, shellac, or resin to the action of creosote, to produce a substance suitable for the insulation of telegraph wire, etc.

172,999. **Processes for Manufacturing Cream-Tartar.**—J. W. Haas, Dubuque, Iowa. [Filed Oct. 1, 1875.] The same consisting in treating the argols, after being ground and placed in a steam-tight vessel, with pure hydrochloric acid, chloride of potassa, and water, and subjecting the whole to the action of compressed or superheated steam for about three hours, and then allowing the solution to stand till the crystallization of the bitartrate of potassa is complete.

February 1, 1876.

173,016. **Evaporators for Drying Animal and Vegetable Substances.**—Charles W. Jones, Centreville, and E. A. Jones, Sturgis, Mich. [Filed Nov. 10, 1875.] An evaporator combining one or more flues, horizontal, or nearly so, with a set of trays or screens movable edgewise within the flue, for holding the articles to be dried, together with an air-forcing appliance for producing a continuous current of air edgewise of the screens.

173,023. **Oil-Can.**—James Knowlden, Baltimore, Md. [Filed Jan. 6, 1876.] The detachable chambered cover, having sliding cover, flange or rim, and diaphragm provided with centre sieve, ribs, door and pump.

173,024. **Fluid Meters.**—Thos. W. Lane, Boston, Mass. [Filed Oct. 26, 1875.] The piston is hollow with ports. Within it is a cylindrical valve, which in turn is controlled by a valve piston within it, the cylinder, piston, cylindrical valve and valve piston being nested in the above order, one within the other.

173,050. **Eye-Glasses.**—Chauncey C. Parker, Brooklyn, N. Y. [Filed Jan. 25, 1876.] The method of connecting together the frames of eye-glasses, consisting of a plate, with flanges, tongue and shoulder.

173,051. **Fracture Apparatus.**—Charles R. Park, Bloomington, Ill. [Filed Nov. 5, 1875.] Upward pressure is made against an adjustable collar, which is fitted around the thigh, and the pressure thus taken off the femoral vessels and external lateral curvature. This collar is connected by vertically adjustable rods with a foot-plate, which is rigidly secured to some support.

173,061. **Bottle and Jug Locks.**—Joseph W. Robards, Richmond, Va. [Filed July 26, 1875.] The lower end of the cap forms a rim, made in three sections, one being fast while the other two are fastened to it by hinges. These sections have inward projecting flanges to fit the bottle-neck. When the curved flaps are brought together, the double catch of the one locks in the spring jaws of the other, causing the cap to fit closely about the cork and neck of the bottle. The device may be so arranged, by an external slide, that the key will not release the catch and springs.

173,071. **Invalid Chairs.**—C. B. Sheldon, New York, N. Y. [Filed Jan. 6, 1876.]

173,088. **Machines for Corking Bottles.**—Mann S. Valentine, Richmond, Va. [Filed Aug. 4, 1875.] The bottles are brought, lifted up to the cork-guide and held fixed, by an endless apron having sockets, and operated upon by the devices shown. The corks pass through the magazine and guide, and are forced into the bottle-neck with a downward rotary motion by the plunger.

173,089. **Bottle-Necks.**—Mann S. Valentine, Richmond, Va. [Filed Oct. 2, 1875.] An internally threaded neck of a bottle, the threads or grooves being deepest in the centre, and gradually dying out before reaching the upper and lower extremities of the neck, takes a full and effective hold on the central part of the cork without impairing the air-tight fit of its ends.

173,099. **Fruit Dryer.**—John J. Yuncker, Mansfield, Ohio, assignor to himself, George W. Scott, and Charles B. Norman, same place. [Filed March 23, 1875.] The inner wall unites at its top with the outer one, forming a hot-air chamber. There are perforations through the inner wall between the ledges, which are formed out of the material of wall itself.

February 8, 1876.

173,105. **Compositions for Preserving Milk.**—W. Scott Barney, Baltimore, Md. [Filed Aug. 30, 1875.] Composition for the prevention of souring of milk; the composition consisting of salt, saleratus, sugar, and nitre.

173,128. **Ebullioscopes.**—P. M. E. Malligaud, Paris, France. [Filed July 6, 1875.] Determines alcoholic strength of liquid. The cooler condenses the vapors of the liquid, and returns the condensed liquid to the boiler.

173,133. **Bottle Stopper.**—Jos. Morschhauser, Hyde Park, N. Y. [Filed Sept. 23, 1875.] The action of the yoke is such that it first draws the stopper down with force, and then locks past the centre, so that there will be no tendency of the parts to unlock when the cork is subjected to a pressure from within the bottle.

173,156. **Combined Shoulder-Braces and Suspenders.**—John W. Broderick, Boston, Mass. [Filed Dec. 30, 1875.]

173,168. **Weigh Scales.**—Jas. T. Guthrie, Leesburg, Ohio. [Filed Jan. 12, 1876.] Removable plates attached to scale beam, give at once the quantity and value of the commodity.

173,189. **Devices for Packing Condenser Tubes.**—Francis B. Stevens, Hoboken, N. J. [Filed May 14, 1875.] A surface condenser having tubes, each of which is packed by a gland, recessed so as to hold the packing, and screwed by an internal screw over the hollow standing bolts to tighten this packing.

173,194. **Atomizers.**—William V. Wallace, Boston, Mass., assignor to Alvah Littlefield and F. M. Keeler, same place. [Filed Jan. 4, 1876.] One end of the rubber bulb is supported by a spring arm, which is connected to the liquid pipe just above the cork.

173,211. **Preparing Cereals for Food.**—Lewis S. Chichester, New York, assignor to John J. Tyler, Brooklyn, N. Y. [Filed Nov. 12, 1875.]

173,226. **Processes of Capsuling Medicaments.**—S. A. A. Limousin, Paris, France. [Filed Sept. 17, 1875.] For description, see NEW REMEDIES for February, page 56.

173,254. **Surgical Bedsteads.**—O. Allen, Petaluma, Cal. [Filed Oct. 4, 1875.]

173,270. **Processes and Means for Evaporation of Sirups.**—Jas. Clegg, Almond, Ala. [Filed Dec. 15, 1875.] The side troughs at one end of the pan tip

downward and outward and receive the scum, and direct it to the entrance apartment of the pan, where the bottoms of the troughs there dipping downward and inward, the scum is delivered. The crude brine follows the course of the same troughs into the pan.

173,345. **Bitters.**—Joseph S. C. Rowland, Philadelphia, Pa. [Filed Dec. 28, 1875.] The composition, consisting of chimaha, bark of ash-root, angle-worm root, willow bark, oil of neroli, chloroform, alcohol, and glycerine mixed.

NOTES, QUERIES AND ANSWERS.

[*Under this heading we shall, to the best of our ability, endeavor to answer such questions addressed to us as come within the scope of this journal, providing they are accompanied by the name and address of the writer. Answers to queries received after the 5th of the month will lay over until the next issue.*]

F. T., New York.—*Fehling's Solution* for the determination of sugar in urine is prepared in the following manner: 1. *For quantitative use:* 90.5 grains of pure crystallized sulphate of copper, rapidly powdered and pressed between folds of filtering paper, are dissolved in 1½ fl. ℥ of distilled water, and 364 grains of pure neutral potassic tartrate (or of Rochelle salt) in 4 fl. ℥ of soda solution, spec. gr. 1.120. The copper solution is gradually added to the alkaline solution, and the volume made up to 5 fl. ℥ and 473 minims (or, practically, to 6 fl. ℥) with water, which has been used to rinse the flask in which the copper solution has been prepared. The proportions in decimal weights are 34.639 gm. of cupric sulphate dissolved in 200 cc. water, 173 gm. of Rochelle salt in 500–600 cc. of soda solution of 1.120 spec. gr. After mixing, the whole is to be diluted to 1000 cc.; —220 minims of the former solution correspond to 1 grain of glucose; and 10 cc. of the latter solution to 0.05 gm. glucose. The solutions should be kept in small vials, perfectly full, and sealed, in a dark place. 2. *For qualitative use* we recommend the solutions be kept separate; indeed, we have for some time kept those for quantitative analysis likewise separate, but unless sugar determinations are of frequent occurrence, it is best to make the test liquid only when wanted, according to the above formulæ. When keeping them separate, make the copper solution measure 3 fl. ℥ (containing 90.5 grs. of $CuSO_4$), and dissolve the Rochelle salt (364 grs.) in soda solution of 1.165 spec. gr., until it measures 3 fl. ℥. For use, mix equal quantities of both, by pouring the former into the latter.

B. A. S., Philadelphia.—A notice of the new element "gallium" will be found in our January number, pg. 4. The discoverer, M. Lecoq de Boisbaudran, has since then communicated further researches to the French Academy, the main results of which are the following: The electric spectrum of gallium, of a beautiful clear violet, is brighter in line 417 than in line 404. In a gas flame, only the line Ga *a* 417 is visible. The chloride and sulphate are precipitated by NH_3; the precipitate is soluble in excess of NH_3. A dilute ammoniacal solution of these salts is precipitated by acetic acid; the sulphate is soluble in 60 per cent. alcohol; it is capable of forming an ammonio-gallic alum. An acid solution of gallic chloride is precipitated by yellow prussiate; metallic gallium obtained by electrolysis is a bright metal, whiter than platinum, and occasionally obtained in crystals. The discoverer has found Ga in a number of other zinc ores, notably in a blende from Santander. He supposes Ga to belong to the aluminium group, and that its oxide has therefore the formula Ga_2O_3.

A. H., N. Y.—The new test-paper for alkalies you inquire about is probably the one proposed by E. Waller, Ph.D., of New York, which is made by dipping strips of white paper into a solution of coralline. On immersing a strip of this paper (almost colorless) in a very dilute alkaline liquid, it assumes a beautiful red color. Acids turn it yellow, and in this case the color is less characteristic.

J. W. Br., Baltimore.—Your inquiry as to the derivation of musk is probably not meant to apply to its source, for this must certainly be known to you, but to the name. Presuming this to be the case, we will state that musk is not an Arabic word, as the U. S. Dispensatory states, but is derived from the Sanskrit *mushka*=testicle, from which are derived the Persian *musk*, Arabic *mushk*, and Greek *μόσχος*. Another name for it was *kastûrî*, which corresponds to the Greek *καστόριον*, and was used by the tribes inhabiting Kashmeer to denote, not the castor obtained from the beaver, but musk alone. The Greek word, however, was never used in the latter sense.

C. R. P., Newark, N. Y.—*Oleum Ovorum*, or, *Oil of Eggs*, is prepared as follows: A suitable number of eggs are broken into a tinned vessel, and heated on the water-bath under constant stirring, until the mass has assumed the consistence of a soft ointment, and a small portion pressed between the fingers shows traces of oil. The whole mass is now enclosed in a linen bag, placed between two boards, immersed in hot water, and forcibly expressed. The resulting oil is filtered and kept in small, well closed vessels. Two eggs yield four gm. of a thick oil, free from rancidity. The same may also be prepared by heating eggs in a porcelain vessel on the water-bath until they are reduced to a dry, pulverulent mass, which is placed into a displacement apparatus and exhausted with carbon disulphide. The latter is evaporated or distilled off, and the oil remains behind.

N. L. (Syracuse, N. Y.)—Offensive perspiration of the feet is often quite as difficult to cure as it is troublesome to endure. Although the perspiration of the general surface of the body may be in some cases offensive, that of the feet may be made worse by decomposition of sebaceous matter, and very much can be accomplished by preventing this by frequent changing of the socks and shoes. If the case is not an aggravated one, bathing the feet daily with alum-water may lessen the secretions. Hebra and Martin recommend that each foot be strapped for twelve hours at a time with diachylon plaster. The most recent remedy is the use of salicylic acid mixed with powdered soapstone and dusted into the socks. This is supposed to prevent decomposition of the sebaceous matter, and consequent development of bad-smelling acids.

L. C. H. (Woodstock, Ohio).—Sirup of codeia is officinal in the French pharmacopœia, and is directed to be made as follows:

	Grammes.
Pulverized codeia	0.20
Distilled water	34.00
White sugar	66.00

Dissolve the codeia in the distilled water, with heat, add the sugar and let it dissolve; then cool. If the product obtained does not weigh one hundred grammes, add a sufficient quantity of water to bring it to this weight, and filter. Twenty grammes (a tablespoonful) of this sirup contain four centigrammes of codeia; five grammes (a teaspoonful) contain one centigramme.

G. A. S. (Port Huron, Mich.)—We could hardly tell, before seeing it, whether the article would be acceptable or not, but we doubt very much its utility.

J. W. J. (New York).—A hair restorative which does not contain plumbi acetas, and which is probably as good as anything in common use, is a mixture of alcohol and castor-oil, to which tincture of cantharides has been added in the proportion of a couple of drachms to four ounces. The

addition of quinia to hair restoratives is fashionable at present. Tilbury Fox gives the following formulæ for stimulating the scalp:

℞ Glycerine, ʒ iij.; lime-water liniment, ℥ iv.; tincture of cantharides, ʒ iij. M.

℞ Distilled vinegar, ℥ iijss.; tincture of cantharides, ʒ vi. to ʒ vij.; rose water, ℥ iijss. M.

℞ Strong ammonia liniment, ℥ ss.; castor oil, ℥ ss.; purified spirits of turpentine, ℥ ss.; white precipitate, gr. xv. M. Brush into the scalp with a hard nail-brush until irritation is set up.

℞ Tincture of cantharides, ℥ i.; distilled vinegar, ℥ iss.; glycerine, ℥ iss.; spirits of rosemary, ℥ iss.; rose water, ℥ viij. M. To be well sponged on the scalp night and morning.

PRESCRIPTIONS AND FORMULÆ.

A New Antiseptic Dressing.—Boracic acid in fine powder, one part; white wax, one part; paraffin, two parts; almond oil, two parts. The ingredients, after being mixed by melting the wax and paraffin, are stirred in a warm mortar till the mass thickens, and then set aside to cool, after which the fine substance is reduced in a cold mortar, in successive portions, to a uniform soft ointment. This is spread thin on a fine rag, and when the almond oil leaves, as it soon does through the capillary attraction of the porous external dressing, a smooth, firm layer remains, which can be separated from the skin without leaving any greasy substance adhering, and does not at all confine the discharge which, while freely shed, is perpetually supplied with a sufficient quantity of boracic acid to insure absence of putrefaction, while not preventing cicatrization. Another, and, it is thought by Dr. Henry, a better application in cases of this nature, is an ointment composed like the one above described, except that instead of one part of boracic acid, it contains half the quantity of salicylic acid, which, while possessing very remarkable antiseptic powers, is even less irritating than boracic acid.—*Advance.*

Gowland's Lotion.—This preparation is much used in England as a cosmetic, for sunburn, freckles, tan, and eczema. It is made as follows:

Bitter almonds	3 oz.
Distilled water	16 oz.
Corrosive sublimate	1½ grs.
Sal ammoniac	2 dr.
Alcohol	4 dr.
Cherry-laurel water	4 dr.

Blanch the almonds and grind them with the water, and pass through a cloth. Dissolve the salts in the cherry-laurel water and alcohol. Mix the two solutions.

Salicylic Acid in Forms for Administration.—This substance is sparingly soluble in cold water (requiring about 1000 parts), much more soluble in hot water and freely soluble in alcohol. It melts at 257° to 302° F., and sublimes at about 400° F. The alkali-metal salicylates are soluble in water. As a dibasic acid, it forms acid salts which are more stable than the normal. It displaces carbonic acid from carbonates. With ferric salts, salicylic acid gives a deep violet color (benzoates, a flesh color); with concentrated sulphuric acid and glucose, a blood-red color on warming (benzoic the same); warmed with methylic alcohol and sulphuric acid, the odor of wintergreen oil (characteristic).

The following compilation of formulæ for administration of salicylic acid is abstracted by the *Pharmaceutical Journal* (London), Nov. 13, p. 382, from a compilation by M. Maury, of Lyons, published in *Repertoire de Pharmacie*, Oct. 25:

Salicylic Acid can be very conveniently given in the doses of ten and fifteen grains by enveloping the powder in wafers or the "cachets de pain." It has been administered in this way in fifteen-grain doses for two or three weeks without causing any disturbance whatever, and at the same time producing very notable reduction of temperature.

Sirup of Salicylic Acid.—In giving this acid, the annexed formula for a sirup has been suggested:

		Grammes.
℞ Salicylic acid	ʒ ss.	(1.94)
Oil of sweet almonds	ʒ x.	(38.82)
Gum arabic	ʒ x.	(38.82)
Sirup of almonds	ʒ xij.	(46.58)
Orange-flower water	ʒ xij.	(46.58)

EXTERNAL USE.—Dr. Wagner recommends that a thin layer of finely powdered salicylic acid should be spread upon calico, and applied by means of a bandage to wounds.

POMADE.—Dr. Wagner gives the following formula:

Salicylic acid	15 parts.
Alcohol	30 "
Lard	150 "

It is important to use the alcohol as a solvent; the direct mixture of the acid with the lard does not give the same good effects.

DENTIFRICES.—M. Paulcke, a pharmacien at Leipzig, prepares as a dentifrice a powder in which salicylic acid is incorporated; also an *elixir "dentifrice,"* from a solution of the acid aromatized with oil of wintergreen.

FOOT POWDER.—It is stated that salicylic acid removes the odor of sweat from the feet, without preventing the sweating; its action being to prevent the formation of butyric, valerianic, and other acids of the same family, which injure the feet. M. Paulcke, therefore, prepares with salicylic acid, soap, talc, and starch, a powder for the feet, which, while rendering them firm, is said to induce an agreeable softness, and removes all unpleasant smell.

MIXTURE.—The following formula is accredited to Prof. Wunderlich:

Salicylic acid	1 gramme.
Oil of sweet almonds	20 grammes.
Gum arabic	10 "
Sirup of almonds	25 "
Orange-flower water	45 "

A teaspoonful to be taken every hour. When children are sufficiently old to use a gargle, Dr. Fontheim says it may be so administered every hour.

SOLUTION IN GLYCERINE AND WATER.—M. Müller, a pharmacist at Breslau, gives the following:

Salicylic acid	1 gramme.
Glycerine	20 grammes.
Distilled water	80 "

First treat the acid with the glycerine and then add the water.

In Switzerland salicylic acid has been used in typhoid and paludal fevers, etc. It has been noticed that it has a very remarkable cumulative action; for after having obtained the desired remission by a first dose of four to eight grammes, it has been found that a dose of one-half or one-fourth that quantity on the following days is sufficient to keep the temperature within good limits. Dr. De Cerenville recommends that these doses should be administered in water, flavored with liquorice juice.

The following formulæ are due to M. Maury:

ANTISEPTIC MOUTH PASTE.

Rectified salicylic acid	2 grammes.
Honey	34 "

COMPOUND POWDER FOR EXTEMPORANEOUS ANTISEPTIC MOUTH PASTE.

Rectified salicylic acid	2 grammes.
Powdered sugar, or some other inert powder	20 "

Mix. To be applied to the sore parts of the mouth by means of a brush previously moistened with water.

LOZENGES.—Salicylic acid, with sufficient gum and sugar for each lozenge to contain 25 milligrammes of the acid.

SALICYLIC SIRUP.—Pure salicylic acid, with sufficient sirup of orange-flowers for 20 grammes to contain 5 centigrammes of the acid.

MIXTURE.

Pure salicylic acid	1.50 grammes.
Powdered gum arabic	10.00 "
Sugar	10.00 "
Orange-flower water	20.00 "
Distilled water	10.000 "

F. s. a.—Shake the bottle before each dose. A teaspoonful every two hours for children.

SALICYLIC WINE.

Pure salicylic acid	2 grammes.
Muscat wine	100 "

WINE OF CINCHONA AND SALICYLATE OF QUININE.

Calisaya bark	30 grammes.
Salicylate of quinine	1 gramme.
Madeira wine	1000 grammes.

INJECTION.—A solution of one part of salicylic acid in 300 parts of water has been used as an injection in fluor albus.—*Peninsular Jour. of Medicine.*

Compound for Removing Grease-Stains from Clothing.—An earthy compound for removing grease-spots is made as follows: Take Fuller's earth, freed from all gritty matter by elutriation with water; mix with half a pound of the earth so prepared half a pound of soda, as much soap, and eight yolks of eggs, well beaten up with half a pound of purified oxgall. The whole must be carefully triturated upon a porphyry slab; the soda with the soap in the same manner as colors are ground, mixing in gradually the eggs and oxgalls previously beaten together. Incorporate next the soft earth by slow degrees, till a uniform thick paste be formed, which should be made into balls or cakes of a convenient size, and laid out to dry. A little of this detergent being scraped off with a knife, made into a paste with water, and applied to the stain, will remove it.

A Substitute for Milk.—The *American Journal of Pharmacy* says the best substitute for mother's milk, according to Beno Martiny, is the yolk of hen's egg, which weighs, on an average, fifteen grammes, and when mixed with 57.1 grammes of water of about 100° and five grammes of milk-sugar has nearly the same composition as the milk in the first period of lactation. Subsequently, the fat and protein decrease, and to one yolk may be added one hundred grammes of water and six grammes of milk-sugar.

Morell's Antiseptic Fluid.—This fluid, which is much used in English hospitals for antiseptic purposes, as well as for embalming, is prepared after the following manner: Dissolve 13.5 parts arsenious acid and 6.9 parts of sodic hydrate in 15 to 20 parts water, add enough carbolic acid until the clear fluid, after stirring, appears turbid (that is, until the liquid is fully saturated with carbolic acid), and dilute with water to make 100 parts.

Chrome-Glue.—Prof. H. Schwarz recommends the following preparation as possessing superior advantages to others in the mending of glass vessels, even those which are intended to hold hot water: Prepare a strong gelatine solution, containing five to ten per cent. of gelatine, and add to it one part of potassium bichromate for every five parts of gelatine used. This mixture has the property of becoming insoluble, and resists the action of water, after being exposed to sunlight. The broken surfaces, free from greasy matters, are covered with the solution, pressed together and exposed to sunlight. The same compound would form an admirable substitute for marine-glue in microscopic mountings.

Curry Powder.—The following is the recipe furnished by a native Hindoo, according to the *Chemist and Druggist*, and is said to yield a fine product. The powders must be fresh and of the best quality:

Coriander, fresh seed, roasted but not burnt, and finely powdered	8 parts.
Turmeric, fresh root, treated in same manner,	3 "
Fœnugreek, fresh seed, " " "	2 "
Mustard seed, " " "	2 "
Cumin seed, " " "	3 "

To this add Cayenne pepper to taste. Preferable, however, is the Indian chilli pod, a much larger species than that sold in our shops, and not nearly so hot.

ITEMS.

British Spice Importations.—*The British Trade Journal* is the authority for the following estimates: "Of spices, we receive yearly about 1,000,000 lbs. of cinnamon; about the same weight of cloves, and 500,000 to 700,000 lbs. of nutmegs; of pepper, about 20,000,000 lbs. (three-fourths of which are reshipped to the Continent); of pimento or allspice, 20,000 to 30,000 cwt.; of vanilla, 6,000 to 7,000 lbs.; and of ginger, nearly 34,000 cwt."

A Remarkable Piece of Japanese Dentistry was shown at a recent meeting of the Oregon State Dental Society—a set of teeth made of ivory, inserted in a base carved out of smooth hard wood; being held in their places by wooden dowels. To take the place of the molars some rough iron tacks had been driven into the wooden base. Although clumsy and awkward, the arrangement showed a great deal of patient whittling, and would do good service.

A Newly-discovered Sulphur Deposit.—Immense beds of sulphur have been found in Humboldt county, Nevada, at a distance of about thirty miles off the tracks of the Central Pacific Railway. The material is found at all points on a small mountain, which explorers say is a mass of sulphur. A company is engaged in operating the works, and a town has been laid out which bears the appropriate name of "Inferno."

Borax.—The trade in this article is likely to undergo a radical change by the discovery of deposits of crude borate of soda in the bed of a dry lake in the slate range beyond the Sierra Nevadas, about 140 miles north-east from Bakersfield. In May of 1875 the men working at the lake informed Mr. Arthur Robottom (who discovered the deposit) that no rain had fallen there during 1874. The analysis of a sample of this borax is given as: crystallized biborate of soda 99.75, chloride of sodium 0.25, which is a little improbable on account of its almost absolute purity, and the seeming absence of any but sodium salts.

Mineral Oils of New South Wales.—The cannel coal-beds of the York and Victoria ranges in N. S. Wales are the most productive for oil-making so far known. They yield 58½ per cent. of crude oil, or 152 gallons per

ton. The specific gravity of the oil is 0.860, and it yields 5.9 of naphtha, 50.6 of kerosene, 21.5 of lubricating oil, 3.2 of paraffin, with 18.8 of loss. A peculiar substance, called bog-butter, is found north of Bournda, in the Twofold Bay District, consisting of a yellowish-brown oily clay, containing 8.75% carbon, 15% clay and sand, 48% water, 8% tar oil, and 19% gaseous matters.

Sulphur Mountains.—Upon the small island of Saba, about 100 miles W. S. W. from St. Thomas, West Indies, there is an extinct volcano, 3,000 feet high, on which Gessner, who ascended it from Leverock, the capital of the island, discovered twenty colossal masses of sulphur lying upon a bed of gypsum. Portion of this sulphur is entirely pure, and impurities are in no case present over 40 per cent. He advises the working of the deposit by enterprising capitalists.

Phosphorus Manufacture.—There are now some fifteen phosphorus factories in the world, one-half of which number is in Germany. The total quantity is something over 250 tons annually, about one-half of which is used in the manufacture of matches.

Paris School of Pharmacy.—The ancient buildings of this celebrated school having been condemned as unsuitable and entirely inadequate to the modern demands of science, the National Assembly of France has voted the necessary funds for the erection of new buildings on the grounds of the Luxembourg. The total cost, distributed over three years, of the ground and buildings will be 3,200,000 francs. The plan embraces laboratories of chemistry and physics, library, museum, amphitheatre, administrative building, and botanical garden, all on an extensive scale.

Exhibition of Scientific Apparatus.—On April 1, 1876, an international exhibition of scientific apparatus will be opened in London, under the auspices of a commission appointed by the English Government. According to the original plan, all instruments and apparatus, which subserve the purposes of science, either for investigations or for teaching, are solicited. In addition to these, all those objects which may represent the progress of science, and its application to arts and manufactures, as well as any apparatus of historical interest, are embraced in the plan. The cost of carriage of all objects selected for exhibition will be defrayed by the Science and Art Department, Committee of the Council of Education, South Kensington, London. The following departments of science will in this manner be illustrated: Arithmetic, Geometry, Measurement, Kinematics, Statics and Dynamics, Molecular Physics, Sound, Light, Heat, Magnetism, Electricity, Astronomy, Applied Mechanics, Chemistry, Meteorology, Geography, Geology and Mining, Mineralogy and Crystallography, and Biology. The Chemical Department is to be arranged as follows: Scientific instruments, apparatus, and materials employed in the investigation and teaching of chemical science and in the application of its principles to scientific purposes,—diagrams and models,—illustrations of analytical results,—specimens of chemicals: *a* organic, *b* mineral,—apparatuses and fittings for laboratories and lectures, apparatuses for gravimetric and volumetric operations; for distillation and filtration; for operations by the dry and hot method, such as furnaces, blowpipes, etc.; for refrigeration; for spectrum analysis, illustrations of operations in organic, mineral, water, gas, and spectrum analysis, and methods of investigation connected with vegetation and respiration.

Preservation of Iron or Steel Instruments.—Magnetic needles, horse-shoe magnets, and all other iron or steel instruments, which are not exposed to rough usage, are best preserved from rust or corrosion by a galvanic coating of nickel, which may be precipitated from a solution of ammonio-sulphate of nickel by the addition of potassic citrate or tartrate.

Scientific Subsidies.—The municipal council of Paris has voted the following sums as subsidies to scientific bodies: 100,000 francs to the Faculty of Medicine, 75,000 francs to the Faculty of Sciences, 75,000 francs to the School of Pharmacy, and 50,000 francs to the High School (*École des hautes Études*).

The Anglo-Saxon "Liber Medicinalis." — Our knowledge of the literature of the Anglo-Saxons, which affords us a valuable source for the history of arts, law, and belles-lettres in England, Scandinavia, and Germany, previous to the year 1066, has been enriched by the publication (begun 10 years ago) of a work on natural history, which is as interesting to philologists as it is to physicians and pharmacists. The title of the work is "Leechdoms, Wortcunning, and Starkraft of Early England," and the book contains an elaborate enumeration of diseases and their remedies in form of recipes. The second and third volumes contain an accurate glossary, and a valuable list of Anglo-Saxon names for plants. The work was published by a Cambridge scholar, from several manuscripts, at the expense of the English Government, under direction of the Master of the Rolls.

Salicylic Acid.--In May, salicylic acid stood in the prices-current at 75 cts. to $1.00 per oz.; in January, at 50 to 60 cts. per oz. Prof. Kolbe is said to hold the patent for its manufacture in this country.

The True Jute Plant.—There appears to be considerable confusion as to the plant from which the substance so extensively used in the arts under the name of jute is really derived. On investigation, however, it appears that the crude jute forms from two species of *Corchorus*, namely, *C. capularis* and *C. olitorius*, grown principally in Bengal. Plants popularly known as jute, however, growing in the Madras Presidency, are the *Hibiscus cannabinus* and *Crotalaria junca;* and their fibre is not the true jute, though hitherto considered such.—*Amer. Jour. of Microscopy.*

The Druggists' Advertiser and Trade Journal is the title of a monthly eight-page sheet, devoted to the interest of the retail trade, which first appeared in February, and is published anonymously at 158 Duane street, in this city.

The American Chemist has *not* suspended. We are in receipt of a note from Professor Chandler, saying that the statement [which we derived from one of our exchanges] is without foundation. "It is a fact," he says, "that the *Amer. Chemist* is not published with perfect regularity. Possibly this has given rise to the rumor to which I allude."

Peruvian Sugar.—The production of sugar in Peru increased very materially last year, and the Republic is now becoming one of the great sugar-producing countries of the world. The import of Peruvian sugar into the United Kingdom in 1870 was 251 tons; 1871, 4,350 tons; 1872, 6,550 tons; 1873, 15,950 tons; 1874, 23,700 tons; 1875, 50,000 tons.—*British Trade Journal.*

Nitrate of Soda.—During the past year this article has been more extensively patronized as a fertilizing agent, and a vast increase has taken place in the shipments from Peru. In 1830 these amounted only to 841 tons; twenty years later they had risen to 23,033 tons; in 1874, 252,575 tons left the Peruvian ports; and last year, 326,263 tons. Of these shipments about 45 per cent. on the average have come to England.—*British Trade Journal.*

Action of Ozone on Animal Substances.—M. A. Boillot had made experiments which demonstrated to him that animal substances keep for a long time without putrefying, if five milligrammes of ozone to the litre of air be added. Two specimens placed, one in pure oxygen and one in ozonized oxygen, gave the same results in favor of preservation by ozone.

Communications have been received from William Manlius Smith, M.D., Manlius, N. Y.; M. S. Bidwell, Elmira, N. Y.; Prentice and Sherwood, Janesville, Wis.; Dr. F. Schill, Johnstown, Pa.; Henry G. Piffard, M.D., New York.